

898

TGCTGTGGCA AATTTTTCAT AGTCGACTTG CCAATCCAGA CCAACTACCA CGTAGGCAGG	1800
TTTTTCCTTG TCTTCCACAT AACCAGCCGC CTTGATGGCT TCCTTGAGTC CTGCTTCTCC	1860
GACGACATAG ACGGTCCTTT CAAGCCCCAA ATCATTCATA TAGTCGATGG TTGCCAAAGT	1920
CGCTGTGTAG ACAGTCGATA GGGGCGTATC GATATTAAAA TTCTGAGCCA ACATCTCCTT	1980
AACACTCTCT GGAGTGGGG TTGTATTGTT GGTACAAAG AGATAGGGAA TGTCCCGCTT	2040
TTGCAATTCA TGAACAAAAG TCTCTCCAGC AGGGATTTCG TCTTCCCCT TATAAATGGT	2100
TCCGCTCTAAA TCAATTAAAT AGCCTTTATA TTTCATCTAT TTCTCCCTAA GCCTTTTTTA	2160
TTTCTTGCCA AGTAATGATT GCTTGGGCAT TGATAACCCC ATCACTTGTA ATTTCATGCT	2220
TGCTTTCCAG TCCAGTCCGT TCAACAGCCG ATGTAATCAC CCCACCTGGT CGAACTTCCT	2280
TGACATACTT GAGGTTGATT TTCCTGGGAA TATAGTGGGT CAAAAATCC GCTCCCATGA	2340
CCTCAAAAAT CCAGTCCAAG TATTTACTGT TATTGACATG ACCATTCTATA TCCAAGTCGT	2400
AAAAACGAAC ATGGTAATCC TTGCTGATCG GTTCTTCCAA GGACTCATA TCCGGTCCAC	2460
GGATAAGTTT TTTATCAAAA TCAGACTGGT AAGGAGCCAC AATCTCAGGT TCAACAACAT	2520
GGACTTTTCG ACTGTCGCGG TCCATGAGAA CAAAGGTCGC CATCATGTGG ATGAGCTCCT	2580
GCTCCGCTTC ATTATAAATA GTAAAGCGAC GGTAGCAAAA AAGTCGATTG TAGCTCAAGG	2640
CTTCCGTTTC GATGGTAATT TCTTCCGCAA AACGAGGCAA ACGAACCACC TCAATATCAT	2700
ATTCACGAT AATCCAGACC AGATTATATT CTTCCAAAAT GGCCTTATCA CTAACCTCCA	2760
GTTCAATCGA CTGCATCCCT GAACTTGCA GTGACAGCAA AATCACATCT GGAAGTTTGA	2820
TATGACCGTT CATATCAGCC ATATCAAAAG GAATTTTCAT TTTCATTGA TAAGTTAAGC	2880
CCATGATCCT ACTCCAAAAT AAATCGTTCT GCTACAGTAT CTCCCAAAA GAGACCTCTC	2940
TTTGTATGTC GAACGTGGTC ACCCTCAATC TGCATGAGGC CTTGTTGAAC CAAATCTCTG	3000
ACAATTTCTC CATAAAGTCC AGCAAAAGAC TGTCCAAATT TTTCCTCAA TCGCGCCATG	3060
GAAACCCCGG ATTTCTTGGG GAGTCCCAAG AACATTTCTT CTCCATTG CTCCTTTTGA	3120
CTCAGGTGAT CTTCTGTAAT ACAAGCATTG CCTTCCTCAA CCGCACTGAG ATAATGACGA	3180
ATGGGACCAT GATTTTTATA GCGTACTCCA TTGACATAAC CAGATGCCCC TGCACCAATA	3240
CCATAGTATT CAGCATGTG CAGTACATG AGATTATGAC GACTTTCAA ACCGGGTTTG	3300
GAGAAATTAG AAATCTCATA ATGCTCAAAA CCCGTCGCT CCAGCTCTGC AATGATGTAC	3360
TCAAACATCT CCGCTTCTAG TTCCTCCTTA GGCAGAGGCA ATTTCCACG TCGCATCCGG	3420
TTCATAAAGA CCGTATGGTT TTCTAAAATC AAACATATACA AACTCATGTG GGAATATCC	3480
AATCCAATGG CTTTAGCCAC ATTTCTCTT ACTTGCTCCA TGGTCTGACC AGGCAGAGCA	3540

899

TAAATCAAAT CAATGGAGAT ATTGTCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA	3600
TAAATATCCT TCTCCAAATG ACTGCGCCCA ATCTTTTTC AATCTTATC ATCAAAGGTC	3660
TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTC AAACAGCTAT CTATCCGCA	3720
TCCAAATCGC CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT	3780
TTAGTCAAGC CATTCACTAA CACCTCCAGT TGGGAGCCG ACAGGGCTGT CGTGTTCGA	3840
CCACCGATAT AAAGGGTTGA CAACTTTTCA ATATCATAAG AACGAACTC TTCCAGCAGA	3900
TGCTCTAAAT AGCTGTCGAC TGGCTGATTT TTGATGAAGA CCTTTGAAAA ATCACAATAA	3960
TAACAAATCT GGGTACAAAA TGGGATGTGC ACATAGGCTG ACGTTGGTTT TTTCTGCATA	4020
GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAAT CACCATCCCC AGATACATAG	4080
TCCGTCCGGA GATGGTGATG GTTTATTCTT CTGTTATATC AATCACAATC TCTTCTGAGT	4140
CATCAAGAGC TTCGGCTTTT TCTTGCCATT GCTCCTTGAG ATTATTTAAT TGATTTTTTG	4200
ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAGC AAGTATACTG TCCACAGTGA	4260
TTTCACCTGA CTCAACCTGT TCTTTTGTTC TCAGAACAAA ATCTGTAGCC TGCTCCTTAA	4320
CTTCTGTCAG TTTTTCACAG ACTTGCTCCT TGGCATACTC CGGATCTTCT CTCAAATCAT	4380
CTAGAAAATC TTGAGCCTGA CTGCAAACTT GTTTGCCCTT ATCACTTGTT AAAACAAGG	4440
CAAGAGCTGC ACCTGAAACG GTTCCTAAAA GGATTGAGGA TAATTTACCC ATAAGGATC	4500
TCCTTTTTTA TTTTGTGAAA AATTTACTTG CAAGACGAAG AGCTGACAGA CTTGACCAG	4560
TCTTGAGTGT TTTTGAACCA GCTGATGAAG CTTTCTTGCT CAAGACACGC GCATGGTCAT	4620
TGAGGTCTGA AACAGATAGA GATAAATCTG CAACAGCACT GAAGAGTGGA TCAATCGTAG	4680
CCACCTTGAC ATTGATATCA TCTGCCAAGA CATTGACCTT AGCCAACAAC TCATTGGTGT	4740
GATGCAAGGT CACATCCACA TCTGAAGTCA AGGTTTAAAT CGTCTTTTCT GTTTCATCGA	4800
TGACACGACC AAGCTTTTGT ACAGTAATGA TCAGATAGAC CAAAAAGACA ATCAAAGCTA	4860
GGGCAACAAG AATATATGCA ACTTCTAACA TTTAGTTTTC CTCCTCTGTA ATATAGTAAG	4920
GGGCCTTCTT TCGATTTTGA TAAATAACGA TCATTATACC GAGACCGATA AGGACAACGT	4980
ACAGCCATTG GGACACTCGA AAGCCGAAGA ACATGAGACT ATCTGTTTCG ATACCTTCGA	5040
TAACCATACG ACCGAAACCA TACCAAATCA AGTAAAAGGC CGTGATATGA CCTCGTCTGA	5100
GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAAA GCCAAGCAGA TTCCATAGAG	5160
ACTCATAAAG GAAAGTCGGT TGACGGTAGC TCCCCTCAAT ATACATCTGG TCACGGATAA	5220
AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAAGAAAT	5280

900

TACCCCAACG CCCCAAACCTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAAA	5340
CCCAAGTATT GATGAGTTTA CGGTCAGCAA AGATATAGAG CACAAGAGCC CCACTTATCA	5400
AACCACCGTA AATGGCCAAA CCACCATTCC AAATGGGCAA AATCTCTCCT AAATTCTGAC	5460
TATAGTAATC AAATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAAATA GCCAAGGGAA	5520
AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTTCTTTCTA GGTGCTTCTT	5580
TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTCACAAT ACATAAGGCA TACCAACGAA	5640
TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTGAGCG	5700
ATTAGACTTG TCAGTCGTTT GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCTTGGCA	5760
CGATAATTC TGGCAGCTGC CTCAATCACA ACAGAGATAT TACGACCTGT TTAACTGGA	5820
ATACGAATAC GAGGAATGtA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGACG	5880
ATCAAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CCTGTGAAGA	5940
ATCCTTGACA GCACTCGCAC CGTAGAGACT CATAACATCG ATAATACCAA CCCACGAAT	6000
TTCAATCAAG TGTTTCAAAA TTTCAGCTGG TTCACCCAG AGAGTAATCT CATCCTTGGC	6060
AAAGATATCG ACACGGTCAT CGGCTACCAA ACGGTGACCA CGTTTGACAA GCTCAAGACC	6120
TGTCTCGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC	6180
CATCAA	6186

(2) INFORMATION FOR SEQ ID NO: 132:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9541 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

GAAAATCACA ACCCTTTTGG CAAAATTTT GAGATTATTT TCACAAACTT GATTTTTC	60
AGTATACTCA ATAAAAATTA AAAAAATCCA CTACGTCAAG GCGAGGCTAA TGTGGTTTGA	120
AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATACTA AAATAAAAAA ACTGAACAAT	180
TTGGTTGGGG ACAGCCAAAC CAATTCTCTA CAATGTTTCA GAAACAAGGG TGTGCTATTC	240
CAATTTGAGC CTACTATAAC TGCTCATAGT TGCTGAAACA AAGTCTAGGT AAAAGTCTTC	300
ATAATAAAAA GACCTCCTAT CAAGTGTTCA AAAACTTTGA TAGGAGGTCT TGTGTTGTGA	360
AAATATTTAT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCTTTCA	420
ATTTCAATGA ATGGATTTT TACTAATACT CATAACTGGG AATTGTCTG TGAAAAATA	480

901

GCGAGATAGA TGGTATTTAT AAAACACTCA AGACAGCTAG ACTAATATCA TTAAAAACAT	540
TATCTTCTTT TGAGCGACTG TTGGTTACCA ACATAGCTAA ATTTCTTGCA TTTTCAAATT	600
GATAGGGTTC TGATTTAGCA TTCACAACCA CCAAGAGGTG TTCTTTGCCG TGAACCTCAT	660
AGATAAGGTA GCCGCTATGT TCAATCGCAG AATGCACAAA GACATGATGG TAAATTTTAT	720
CATAGCTAGA GTAAGAAAAG GCACCAGTTT TTGTCTTCAA TCGGATGACT TGACGGATAA	780
ACTCAATACT GTCTTGACGC TCATTAATCA AGTTCCAGTT CACTTGGTTC ACACTGTCAG	840
GAGCATTATA GCTATTCATC GCACGCTCTC TATCATCATG GGTCAACTCA CCATTTTCAC	900
CAGTCGCAAC CAGTTTGGTA CGACCAAATT CTTGACCGAT TTCCATAAAG GCCATCCCCT	960
GCATGAGCAG ATTCATGGCT GTGGCAGTTT CGACCTTGCG CATGATTTGC TCTGAACTTT	1020
GGTCTGGATG AAGGGTTGCC AATAAATCGT GAAGATTGTA ATTGTCATGG GCTTCTACAT	1080
AGTTAAGCAC CTGATTTGGA TGTGTATAGC TTCCTAATTC ACGACTTCCT AGGATTGCTT	1140
TAGCTAGAAT TGGCTCTGTC GCAGCACCAC TGACAAAACC TGACTTGATA GCACCATAAA	1200
CTTCTCCCCC TTTGACAGCA TCGCGCTGAT TGTCAATTAA GAAACCAATA TTTGGCATCT	1260
GGTAGGCATT GTCCTTCTTG GCCTTATCAT AAGGGGCAAG ACCTGTTCCC ATATCCCATC	1320
CTTCTCCATA GAGGATAATG TTGGAGTCGA TTTCATCCAA GCTTTGACGA ATCATCTGCA	1380
TGGTCTTGAC ATCATGAATC CCCATCAAGT CAAAACGGAA GCCGTCAATA TTATATTCCT	1440
GCACCCAGTA TAGAAGAGAA TCAATCATAT ACTTGCGAAA CATTTCGTGT TCACTGGCTG	1500
TTTCATTTCC AACACCCGTT CCATTCTGGA AGGTACCATC TGGATTTCATA CGATAATAGT	1560
AATCAGGGAC TGGTCTTTGG AATGGTGCAT CAACAACTGA GAAGGTATGG TTATAGACTA	1620
CATCCATAAT GACTCCAATA CCCGCATCGT GATAAGCTTG AACCATCACC TTCAAATCAC	1680
GAATGACCTG AGCTGGATCA TCTGGATTAG TTGAAAAACT AGTTTCTGGC GCGTTATAGT	1740
TTTGTGGATC ATAACCCAG TTGTAGGTTA CATTTCATC CTCATCGTAT TCTTTATGAC	1800
GGTCTGCAAT TGGTTGCAAT TGAACATAAT TGTAGCCCAG CTTCCTTGATG TAATCAAAAAG	1860
CAGTTGACTG GCCGTATTGG TTAACGTTC CAGCCTGAGC AGCACCCAAG AAAGTTCCTC	1920
GAAGATGTTC ATCTACACCC GATGTAGGTG ATTTAGTCAA ATCACGAATG TGCATTTTAC	1980
AGATAACTGC CTTACATGGA TTTTCCAAGC GCCAAGTAGC CTCCGAACCG TGCTTAACCT	2040
CGAAGTTTTC AACTTGCTTT TCTACATGGC TCAGAATAGC TGAACGTTTG CCATCAGGGC	2100
TGGTCGGAT TGTATAAGGA TCACGTGTCA GTGTTTGGTG ATGAGGGAAT TGGACTTGAT	2160
ACTGATAACT CTTACCTACC AAATCTTCTT CAACATCCAA ACTCCAGACA CCGATTGTAT	2220

902

TGTCCTTATG ATTATAAGAG TAGCTATTGC CTCTTTTCAT CTCAAAAGTC TTCCAAACGG	2280
GTGCATCATT AGCAGCTGAT TCATAAACGA CAACTTGCAC TTCTGTCGCT GTAGGTGACC	2340
AGAGAGAAAA ATGAGCCTGA TTGTCTCTA CACGGCAACC CAATTCTCCT TGGTAACCCC	2400
AATGATGATC AAAACTAGCA CTGTTAATGG CCTTATCAAA GGCAAAAGGA TTTTGATTTT	2460
TATAGAAAGG ACTGGCAATA GCAGGATTTT CAGAGTAATA AATCCTATCA TCGCCTTCCA	2520
AAATCCAGAC CTCTGTAAAT AGGGGATAGT GATTAAAACG GATAGAATAT TCTTTACTAG	2580
TTTGACCTGT ATGAACCACA AAATCAAGC TTTCTATAAC ATGTGAACCT GGGTGTTCAG	2640
AGCTAAATAA AGCTCCAAAA TAATCTTCTT TGTAGGTTAG CAAATCAATT CGTTGATCCT	2700
GACTTTTAC AAAGGAGCAA GTGTCATATT CTCCATTCTT ACGATGGTAA TGAATGCGCA	2760
TAGGGTAGTT ATACATTTTT TATTTTTCCT TTTTACTTTG TTTCTATTTT ACTAATAAAT	2820
TTTTGTCAAT CTCGTCTCAA TTAACAGACA TAGTCATATT CTCTAAACTC TGTTTTTAAA	2880
CGATCCATTA CAAACTTTCT AGCCATGCCT CATCTCTGAC CTGGATACCA AGTTCTTGTG	2940
CTTTTTCAG TTTTACTTCCA GCGTCTGCAC CTACCACGAC GAGGTCGGTC TTTTLAGAAA	3000
TACTACCTGT CACTTTGGCA CCCAGACTTT CGAGTTTACT TTTAGCTTCT GAGCGCTTGA	3060
GTCGTTCCAA TTTTCCTGTC AATACCACGG TCAAACCTGA CAAGGCCGCA TCCGCTACTA	3120
CCGTCTGTCC TTTATAGTCC AGATTGACCC CAGTTTCTTT CAATTCCTCTG AGCAGAATTT	3180
CAGAGCCTTC TGTCGCAAAA TAAGTCTGAA GACTTTTGGC AATCAGGCCA CCTAGACTTT	3240
CAATACTAGC CACTTCCTCT GAATCTGCCT GAGACAGATT TTCAATTGAA TGGAAATATT	3300
GAAGTAAAG CTGACTAACC TTGCTTCCGA CATGACGAAT TCCCAAACCA AATAAGAGCT	3360
TCTCGGCAGA ATTTTCCTTT GATGCTTGGG TAGCCTGATA CAGTTTAGCA GCGGACTTTT	3420
CCTTAACTCC CTCTAAAAGG ACGAAATCCT CTCTTTGCAA ACGATAAATA TCCGCCACAT	3480
CCTTGACTAA ATTAGCAGCA AAAAGCTTCT CAACAATAGA TGGACCAAGG CCTGTAATAT	3540
TCATAGCATC ACGAGAAGCA AAGTGAATCA AGCCTTCCAT GATTTGAGCA GGGCAACGCG	3600
GATTGATACA ACGTAGGGCC ACTTCATCTT CAAAGTGCAA CAAGTCAGAG TTACAACCTG	3660
GACAGTTTGT AGGGATATCT AGTTTTTCTT CAGAAACCCG TTTGGACTCT ACCACACGTA	3720
AAACGGCAGG GATGATGTCA CCAGCCTTAT ATACAATGAC CGTATCGTCT TTTCGGATAT	3780
CTTTTTCAGC AATATAATCT ACATTGTGCA GGGTCGCACG GCTAACAGTC GTACCGGCAA	3840
GTTGTACTGG TGTTAGATTA GCAGTTGGAG TTACAACACC GGTACGGCCA ACTGTCCAGT	3900
CAACTGATAA GAGTTGAGCT TCTTTTCTT CGGCAGGGAA CTTGTAGGCT ACTGCCACT	3960
TTGGAGCCTT AACTGTAAAA CCAAGTCTT CTGACTTGC TAGGTCGTTG ACCTTGATTA	4020

CCACTCCATC AATATCGTAA GGCAGATTTT CCCGTTCCCTG TCCTACTTCT TGGATAAAAT	4080
TCCAGATTTC ATCTATGTTT TCAGCCAAGA TTCGCTTAGG ATTGACCACA AAACCTAGTT	4140
GTTCTAGGTA CTTCAAACCC TTTTCTTGGC TATCACGAGT TGAAGGCTG GCTTCTTGAT	4200
AGAGAAACGT TGCAAGATTA CGCTTGGCAA CTA CTGCTGT ATCCAAGTGA CGCAGAGTTC	4260
CTGCTGCCGC ATTACGAGGA TTAGCAAATT CAGGCTCTCC ATTTTCTTGG CGCGCTTGGT	4320
TAAC TTGGTC AAAGGAAGCG CGTGGCATGT AACATTCCCC ACGAACTGTG ATATCTAGTT	4380
CTTCTGGCAA AGTCAAAGGG ATGTCCTTAA CACGCTTGAG GTTTTCTGTG ATATTTTCAC	4440
CAATTGAACC ATCTCCACGT GTTACCCAG CAACCAAAAT CCCCTTTTCA TAAGTCAGCG	4500
AGATAGATAA GCCATCGATT TTCAGCTCAC AAATATAGGT CGGATGAGCC ACTTCCTTAC	4560
GAACACGCGC ATCAAAAGCA TCTAGCTCCT CACATGAAAA AGCATCCTGC AAATATAAA	4620
GAGGATACTG ATGACTGTAT TTTTCAAAAC CATCTAAAC CTTGCCACCA ACACGATGAG	4680
TCGGACTGTC TGCTAGCACT TGCTCTGGAT AAGCAGTTTC TAACTCGACC AACTCACGGT	4740
AAAGGCGGTC ATACTCACTG TCTGAAACCG AGGGATTATC GCTGGTATAG TACTCAGTCG	4800
CATAGCGATT GAGCAAAGCG ACTAACTCAT TCATTCTTTT ATTCATAAGA CCATTTTACC	4860
ATAAAACAAG CCCTCCTCAC AAACGAGAAG GCGGAAAAA AACTTAGTT TGAAATTATT	4920
TTTGAACTC AAGCAACCTT ATATCAATTT TTCAAAATGA GTTCGAACAT ATCCGAGAGC	4980
TAAGAAATAT AAGGCTACAA CTCCAAGTCC AATAATCAAG AAAGAATAAA GATGGACACT	5040
TGGCAAGACT GTCATAAATC CTTTGTCAAT AGGCATAAAT AGAATAGCTA AGGTAAAAAT	5100
TGTACTCAGT ACTCTTCCAA GAAATTCGCT CTCAACCTTG GTTTGTACTT GAGTAAAAAA	5160
GTGAATATTA AAAATCGTCA TAAACAATTC ACAAATAAA TTCCAGAAA AGGAAAGAAA	5220
AGTTGGAAGT GGTAATCCCA TCATAAAAC TCCGACACCT GTCAAAGCCA GTAAATCAA	5280
AAGATTATAA ATATTAGCTT TAATTTTACT AGCTAGAAGA GCCCCAATGA TGGAACCAAT	5340
AGCCCCATA GTTAAATAC TTGCATAGGC TCCTTCTGAC CCGTAAAGCT GATTCGAAAA	5400
GGGAAGTAGA AATTCAAAAG CTGCAAAAAA GAAATTAACG CTGGAAGCTA CCAGCAAAAG	5460
GAAGAAAT TCTTGCTGAT GCCAGATATA GTGTAACCCA TCCTTGATAT CTACAAAAAT	5520
ATCTCTCCCA GTAAAAGCCT TTTTCTCTTG AACTTTTGCT TCCTCTTTTG GAAGGAAAGC	5580
CACTAGAACA AAAGCAATGA AAAAAGTCAG CGACTCTAGC AGTAGCGTCA TATGGAGACT	5640
TGCAAACTGT AAAACAAGGA AGGAAAGAAC AGGAGAGCTA ACACCTACAA CCTGCAAAAC	5700
CAGCTCTAAG CGAGAATTAT AGATCACAAT CTCATCTTTC TCCACCACCT CAGTTATGAT	5760

904

AGCTTTATTG GCTGTGCGAG AAAAGGCAAA AGCAATAGCC TGCACAATGT TAGCAACAA	5820
CAAAGCGCCA ATCATCCAGC TATCATTCCT TATGAAAGAA ATAGCCAGAC AAAGAATCCC	5880
ACAAACAAGA TCTGCCGTCA TTAAAATCTT ACGACGAGAA AAACGGTCTG AAATAACTCC	5940
GCCAAAGGGA TTGACGAGAA TAGATGTGAC GAGCTCAGAA ATCTGATACA TTCCTAAAC	6000
TGTCTGTCCT ATAGTCCCCA TAGAAGCCAA CCAGACACTA TTTCCATAAT CATAGAGCAT	6060
ATTTCCTTAT TTATTGATAG CCCACGGCT AATCAACTGC ACTGCATAGC GATTCATATT	6120
AAAGCTCCTC TCAAATTTTG AAACATTTGT ATCAAAACCG AAAGGAGCTT TTTATTTTTT	6180
CCCTTATTTG GGAAAATTAA CTTTTGACAA ATTTTTCGTA GTGTTCTCTG TAATAGGCTA	6240
CTTGCTCTGG AAGACCTAAC ACATCAAAAA TATGCATGGC CTCTTGACATC TGCTTACAGC	6300
CTTCTTTACA CTGTCCTTTT TGATATAAGG CAAAACCTTT TAAATAATGG AAAACATTAC	6360
GCTCATAAAG CTTAATACCT TTGTCAATAA TCTTCTCTGT ATAAGCCTCA AAATAGTTGG	6420
CATTATAAAA AGAAGAATGC TCTAAACAAT GCTGGTAACA ATTGAGGGCC AAAATCAACA	6480
CTAATCTCTT ATGGCGACTA ATCTCTTGGT AAAATTCCTC CCTCTCCATA ACTTCTCTAC	6540
CAATCCGAGT GACATAGTCT ACATCGTAGA AACTATAGAG GTTACCGAAA AGAATCAACT	6600
CATACATGGT CCATTCTTCT GTTTTGAAGA GATAATCTGC TACCTTACCC AAATCATCCT	6660
GCTTCATATC ATAACCTGCA TCTCTTTGAC AAATCAGACC TTGTAGCAAA ATCCAGTTCA	6720
GCTCAAAATA AAGGGGAGTC GTCGAACCTC TAGACTTTTC AAGTTGTTCT CTTTGAAGCT	6780
TTTGAAAACC TGCAATATCG TTTGAATAGT AAAGTGGGAT AATCTGTGCC ATCATAGACA	6840
CATGTTTCATG ATTATGAAAA TTCCCTTGCCT TATCCATGAA ATTTTCGATT GTTACATGAA	6900
TGTTATCCAA AATCTCAAAG AAACGGGAGA CTGCCAGGTC AGACTCCCCA AGCTCAAAGC	6960
GAGATAACTG AGAGGTAGAG CAGGATTTCG C TGCTGCTTC CTTTAAAGAA TAATTTCCAC	7020
TTGTTTCGAAA TTCACGAAAT ACTTTTCCAA GATGTTCCAT CTTTACACCT GCTCTGATAA	7080
TTCTTCCCAC TCAAGCATAG CTTCTTCCTG ACGATGGCTG ATTTTGTCCA GCTCAGCCTG	7140
TAATTCATG AGTTTGTGCG CATCGTTTGT TTCCAACATT TGTTTCAGAAA TGGCTTGGCT	7200
TTGACTTTCT AGCTCTTCAA TTTCAGCTTC TAGACTTTTC ATTTGTGCGA TGAGTTTGGC	7260
AACTTCTTTT TGACTTTCTT TCTGGGCTG ATAGTCATTG ACTGGACTTG CTTCTTTTGC	7320
TTGATTGCTA GTTGAAGCTT CCTCAGTCTG ACTCATTTCT GCTGTTGCTT TCTTCTCAAC	7380
ATAGTAGTCG TAATCTCCAA GGTAGAGAGT TGAACCATC TCAGACAATT CCAAAACATG	7440
AGTTGCCACA CGATTGATAA AGTAACGATC ATGACTGACA AACAGCAAGG TTCCATCAAA	7500
GTCAATCAAG GCATTTTCTA GCACTTCCTT ACTATCAATA TCCAAGTGGT TGGTCGGCTC	7560

905

ATCCAGAAATC AAAAAGTTAT TGTPTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT	7620
TTCCGCCACCA GATAGCATGC CGACTGATTT TTTAACATCA TCTCCTGAGA AAAGGAAGGC	7680
TCCAAGACGG TTGCGGATTT CAACTTCTGG TGTCAGTTTG AAATCATTC CAGATTTCATC	7740
CAGCACCGTA TTACTTGGTG TCAGCTTGCT TTGGGTTTGG TCATAGTAAC CAACCTCAAC	7800
ATTAGCGCCA AAGCGCTTTT CTCCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT	7860
AAAGGTTGAC TTGCCGATAC CATTTGGACC AACGATAGCG ACAGCATTC TCTTACGAAG	7920
ATCTAGGTTA ATCGGTTGTG ACAAGACTTC CCCGTCATAG CCAACAGCTG CATTTTCAAC	7980
AGTCAAAACA ACATTGCCCG ACGTTTTTTC AGACTGGAAG GTCATGTTGG CTGATTTCTT	8040
GCCAGCTTCA GGCTTGTTCA AACCTCCAT TTTTCCAGT TGTTCACGGC GAGATTGAGC	8100
ACGTTTAGTC GTTGAAGCAC GAACTAGATT GCGATTGACA AAGTCTTCCA GAGCAGCGAT	8160
TTCTTCTGT TGCTTTTCAT AGTTTTTTCG CTCAGTAACT AGCTTTTGCT CCTTCAATTC	8220
GACAAAACGA GAGTAATTCC CCACATAGCG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT	8280
AATTGTCGCA ACCTTGTTCA AGAAATAACG GTCGTGGCTG ACGATAATGA GGGCACCGCT	8340
ATAGTTTACC AAGTAATTCT CTAGCCAGGC GATCGTTTCA ATATCCAAGT GGTAGTTGG	8400
CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAAACGAGT	8460
ATTTTGACCA CCAGAAAGCT CAGCAATTTT CATCTGCCAC ATAGACTCGT CAAACTTGAA	8520
TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GGCAGAAATT	8580
CTCAGATAAG CGGTCATAAT CTGACATCAG TTTATCCAAA TCCTCACCAG ACTTTTCACC	8640
CATCTCCAGC TCCATCTGAC GCAGTTGTCT CTCCGTCCGA CGCAAATCAT TAAAGACATG	8700
AAGCATTTCA TCGTAGATGG TATTTTCAGA CTCAAAACGG CTATCTTGGG CTAGGTAAGA	8760
CAGAGAAATA TCTTTTTTCT TATTGATTTC TCCGCTAGTT GGCTCCTCTT CTCCAATAA	8820
AATCTTCAAA AGAGTAGACT TACCTGCACC ATTTTCCCA ACAAGAGCAA TCCGATCTCG	8880
TTCATCAACC TGCAGGTGA TATTATCGAA AAGAACCTCT CTGCAAAAAG AACGTTCAAT	8940
TTTATTAGCT TGTAATAATA TCATACAAGT AGTATAGCAT GTTCCCTAA GGCATTCAAG	9000
ATAATCGTAA GTCTTTTAGT ACAACTTTTA TAACATAAAA TAACTAAAT TATGTATATT	9060
TTATATTAGA TTACTTCACT ATCTTGTTGG ATTTTCTAAC CAGCTAATCT TGTTCAAAT	9120
AGTTATCGCA CAAGTCTATT ATTTAATCTT TTTTCATCT TACGTACGTA TAGCAGATTG	9180
AAATAAGATG AGAACAAATC GATTGGGAAA GTAAATTA TTTCTATAAA TGTTTTAGCA	9240
ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT	9300

906

TTTAACTCT ATTTATTACT AGATTTCATA ATTAAAAAAC CTACTGACCA AGCTAGAAAG	9360
CTTGATACAA TAGGCTTTTT AAAGACTGAT TATTTAACAG CGTCTTTAAG AGCTTTACCA	9420
GCTTTGAATG CTGGTACTTT AGAAGCTGCA ATTGTCAATT CTTTACCAGT TTGTGGGTTG	9480
CGACCTTTAC GTTCTGCGCG CTCACGAAC TCAAAGTTAC CAAAACCGAT CAATTGAACT	9540
T	9541

(2) INFORMATION FOR SEQ ID NO: 133:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3502 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

TTGACTATCC TATCATGCTT TCTAAGGTCT ACTCAAGAAA ATCATTTCAC AGTTTTTACA	60
CCTTTCTCAA AAAAGTTAAA AAATTTTCTC AAAAACGCTT GACTCTGACC TAAGGCGAAG	120
GGTTATACTA TCATTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT	180
CAGGTGTCTC TGCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCCTTAA	240
AGTCGGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATTT GGAACGCCTT CAGGTCATTC	300
TTTACTACAA ATATCTAGGC TTTTCTTTAG AGAAAATAGC AGAGCTGTTA AAGGAAGAAA	360
GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC	420
ATCTGGATAC CTTGATTTC ACCTTGCAA AACTATTCA AGAACAAAA GGAGAAAGAA	480
AAATGACCAT TGAGGAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC	540
AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG	600
GTCACGAAGA CGAGGCTACG GCCGCCTTTA ACCAAGTCTT TCAAACCTTG GCACAAAATC	660
TTCAAGTTGG TTTACCTGCA ACAGCAACCG AAAACCAGGA GCAAGCAGCC AAGCTCTGTC	720
AAGCCATTCG CACTTATGGA TTTGACTGCT CTATTGAGGT ATTTCGGTCAT ATCGGTAAAG	780
GTTACGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTCTT GAAACAGCCC	840
AGTACACGTC AGATGCCATT GCGGTTTACG TTCAGACAAA TGCAGAATAA ATAGGCTAGG	900
AATTTCTTAG CCTATTTTTT ACTTCAAATC ATAAAGCCAG TCGTCACCGT TTTTGTAGTA	960
AAAGAATTCA CTGAGATCTT CTTCTAGAAA CACACGAAGC ATATCAGACA TATCATCGGT	1020
TGCAAGTTTT AGATGAGAAA GATTTTCAAA GTCCTCCAC CAAACTTTCC CTTCGTCTGA	1080
AGACTGGAGT TCACCACTAA AGTGTCTGT CTTGTAAAA AGGACGACAT AACGATAATC	1140

907

CTTGTCGTCA TACCAGTTT TGATACCACA GAGTTGGGGT TTGGAAATGA TCAGACCAGT	1200
TTCTTCTTTC ACTTCACGAA TGACAGCATC GACAAAGGAT TCGCCACGTT CAACATGACC	1260
ACCAGGAAAA GTAATGCCAG ACCAGTCGGG ATTAACTCGG TCTTGGACCA GGACCTTATC	1320
TCCGTTTTTA ATCATACACA TGTAAACAAA TTCGACTGCC TCTCTTCTGT TCATTCTTCA	1380
CAACCTTTAA TCTTTAATCA TAATGCAGAC TTCCCGCCAC CCAGCCGGTA CAGAGGGCAG	1440
AAGTGATGTT AAAGCCACCC GTGTGGGCAT TGATATCCAT AACTTCGCCT GCAAAGTGGA	1500
GGCCAGGTAC CAGCTTACTT TCAAGGGTTT TAGGATTGAT TTCCTTGAGA CTGACTCCAC	1560
CCTTGGTAAC AAAGGACTTT GCAAGGGACA TTTTCCAGT TACAGGAATT TTAAGTTCTT	1620
TAATGGACTG GACAAGTTGT TCTCGTTCCT TTTCAGTCAG TTGTTTGACT TTTTCAGGAT	1680
ATCCTTGATC AAAAAATTCG GCCAAGCGTT CTGGTAACAA GGTTTTTAAA GCGTTTTTCA	1740
AGGATTTTTTC CCGATTTTCT TCTAGAAATG TAACCAAGTC CTCTCAGAA AGTTGAGGCA	1800
AAACATCGAG TGAGAGAACC TCCCCACCTT TGACAAAGCT AGACATGCGT AGGGCAGCAG	1860
GACCTGACAA ACCAAAGTGG GTAAAGAGTA AATCATGAGT GATGACATGC TTACCATAAC	1920
TTAGGGTCAC ATCGTCCAGA GAAATACCTT GTAAGGCTTT ATGTGGAAAA TCTGTTAATA	1980
AAGGACTTTC AGCAGCCTCA AGATCGGTGA TGGTATGCTT AAAATGGCGA GCAATCTCGT	2040
GACCAAAACC AGTCGAACCA GTCGAAGGAT AAGACTTACC ACCTGTTGTG ACAATGAGTT	2100
TCTCACAAGT GAAGGTTTGA TCCGCTGACT TAAGGACAAA CTGGTCATCT ACTTTTTTAA	2160
CAGAAACGAT TTCTATTTGA GTAGCAACTT GACCACCTAG TTCGGTGATT TTCTTTTCCA	2220
AAGCTTCGAT AATAGTCCGA GACTTGTCAC TGGCTGGAAA GACGCGTCCG TGGTCTTCGA	2280
CCTTAAGTTT AACACCATT TCTGTAAAA AGTTGATGAT GTCATGATTA TCGAACTGGG	2340
AGAAAACACT GTAAAGAAAG CGTCCGTTTC CAGGAATTCC AGCTAGCAGG TTGTCTAAGC	2400
TACCATTGTT GGTACATTG CAACGTCCCC CACCAGTCCC AGCTAATTTT TTTCCAAGTT	2460
TCCGATTTTT TTCGATGAGG AGGGTTTTCT GTCCATAAAA GCTACTGGAA ATCGTAGCCA	2520
TCATACCAGC AGGTCCCCA CCGATGACAA TAGTATCAA ATGTTTCATA GCTCTATTGT	2580
ACCACAAAAA AACAAGAGAT GATGGTCACC TCTTGTCAAG AATGCAATTA ATCAATTICA	2640
TAGCCCATCA GCAAACCGCC CTCTTCTGCA TAGAAACTGC AGAGACCAGA GGTGGTAGA	2700
ATTTAATAT CCGCTTGTGG GAAGGTTTCA CGGATTCGCT CTGAGAGCTG TTGACAACAT	2760
TTTTCGTTAT TCGTGGGC CATGACAATA CGGCCACCAG CATATCCAGC TTTTACTAAC	2820
TCATCATAGG CAGCTTGAAC TGATTTCTTT GATCCCTTG CTTTTGTAG CAATTCGAGA	2880

908

GTCCAGTTT CACTAGCTTT TCCGACCATA CGAATGTTGA GAAGGCCAAC GACCGTACCG	2940
ATAAGCTTGC TCAAACGGCC GTTCTTCACC AAGTTATCGA CTTTGGCTAG GACAAAGAGC	3000
AACTTAGTTT TTTCTTGATA GCGGGTGATA GCTTCAACCA CTTC'TTCAAA AGACAAGCCC	3060
TGGTCAATCA AGTCATTCAA TTTTCTACG AGTAGGTCAA CTTCACCACC AGCAGATAAA	3120
CTATCAATCA CATGAATCTT AGTGTGAGGA TGGTCTTCCA GATAAATATT CTTTGCTAGT	3180
TGAGCACTAT TGTGACTGCC AGAAAGGGTA CCTGTGATGG TTAGTAGGAA AATGTTTTTG	3240
GCACCTTCAA ATGCTCGCAA ATAGTCATCT GGGCTTGAC AAGCCGATTT TGAAGCTTCT	3300
GCAGTTGCAT ACATGGTTTC CATCATTTGG TCAATATCGA GACTGGCGTC ATCAACAAAG	3360
ACCTGATCAG CTACTTGAAT GGTAAAGGG ACACTTACAA AGGTTGTCTT AATAGCTGGT	3420
GTTGGCAGTT GACGATAATC ACAACCAGAG TCAGCAATAA TCTTCCAAGT CATAGAAATT	3480
CTCCATCTTT GTCAGGAACG AT	3502

(2) INFORMATION FOR SEQ ID NO: 134:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12665 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

CGATTGATTT TTTTAAAGCG TTCGATAGAG AATGAGAAAC GAATCCTTAG CAATGGCGGG	60
AAAGAATTTG GAGTTGAGAA TACAAAACGA TTAATATGG CTCATATTGT TTTTATCTC	120
TCTTGCTTGG TTGAGGCAAT GGTGCACAAG ACAATTTTG ATGGCATGGG CATGGTTGGT	180
TTAGTCTTGC TTATTTTTC TATGCTGATG TTGATGTTGG TGATTCACCT GTTGGGAGAT	240
ATTTGGACAG TGAAGCTTAT GCTTGTCAT AATCACAAAT ATGTAGATCA TATCTTGTTC	300
AGGACAGTAA AACACCCTAA TTACTTTTTC AATATCTTC CTGAGTTGAT TGGCTTGACC	360
TTGTTGAGTC ATGCTTATGT GACTTTTGTT TTAGTTTTTC CAGTTTATGC AGTTATTTTG	420
TATCGACGAA TAGCTGAAGA GAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC	480
ATAAAGAGAT AAATACAAAA TTCGATTAT ATACAGTTCA TATTGAAGTG ATATAGTAAG	540
GTTAAAGAAA AAATATAGAA GAAATAAAC ATGTTTGCAT CAAAAGCGA AAGAAAAGTA	600
CATTATTCAA TTCGTAAATT TAGTGTGGA GTAGCTAGTG TAGTTGTGTC CAGTCTTGT	660
ATGGGAAGTG TGTTTCATGC GACAGAGAAC GAGGAGCTA CCCAAGTACC CACTTCTTCT	720
AATAGGCAA ATGAAAGTCA GGCAGACAA GGAGAACAAC CTAAAAACT CGATTCAGAA	780

909

CGAGATAAGG CAAGGAAAGA GGTGAGGAA TATGTAAAAA AAATAGTGGG TGAGAGCTAT	840
GCAAAATCAA CTAAAAAGCG ACATACAATT ACTGTAGCTC TAGTTAACGA GTTGAACAAC	900
ATTAAGAACG AGTATTGAA TAAAATAGTT GAATCAACCT CAGAAAGCCA ACTACAGATA	960
CTGATGATGG AGAGTCGATC AAAAGTAGAT GAAGCTGTGT CTAAGTTTGA AAAGGACTCA	1020
TCTTCTTCGT CAAGTTCAGA CTCTTCCACT AAACCGGAAG CTTCAGATAC AGCGAAGCCA	1080
AACAAGCCGA CAGAACCAGG AGAAAAGGTA GCAGAAGCTA AGAAGAAGGT TGAAGAAGCT	1140
GAGAAAAAAG CCAAGGATCA AAAAGAAGAA GATCGTCGTA ACTACCCAAC CATTACTION	1200
AAAACGCTTG AACTTGAAAT TGCTGAGTCC GATGTGGAAG TTAATAAAGC GGAGCTTGAA	1260
CTAGTAAAAG TGAAAGCTAA CGAACCTCGA GACGAGCAAA AAATTAAGCA AGCAGAAGCG	1320
GAAGTTGAGA GTAAACAAGC TGAGGCTACA AGGTTAAAAA AAATCAAGAC AGATCGTGAA	1380
GAAGCAGAAG AAGAAGCTAA ACGAAGAGCA GATGCTAAG AGCAAGGTAA ACCAAAGGGG	1440
CGGGCAAAAC GAGGAGTTCC TGGAGAGCTA GCAACACCTG ATAAAAAAGA AAATGATGCG	1500
AAGTCTTCAG ATTCTAGCGT AGGTGAAGAA ACTCTTCCAA GCCCATCCCT GAAACCAGAA	1560
AAAAAGGTAG CAGAAGCTGA GAAGAAGGTT GAAGAAGCTA AGAAAAAAGC CGAGGATCAA	1620
AAAGAAGAAG ATCGCCGTAA CTACCCAACC AATACTTACA AAACGCTTGA ACTTGAAATT	1680
GCTGAGTCCG ATGTGGAAGT TAAAAAAGCG GAGCTTGAAC TAGTAAAAGA GGAAGCTAAG	1740
GAACCTCGAA ACGAGGAAAA AGTTAAGCAA GCAAAAGCGG AAGTTGAGAG TAAAAAGCT	1800
GAGGCTACAA GGTTAGAAAA AATCAAGACA GATCGTAAAA AAGCAGAAGA AGAAGCTAAA	1860
CGAAAAGCAG CAGAAGAAGA TAAAGTTAAA GAAAAACCAG CTGAACAACC ACAACCAGCG	1920
CCGGCTCCAA AAGCAGAAAA ACCAGCTCCA GCTCCAAAAC CAGAGAATCC AGCTGAACAA	1980
CCAAAAGCAG AAAAACCAGC TGATCAACAA GCTGAAGAAG ACTATGCTCG TAGATCAGAA	2040
GAAGAATATA ATCGCTTGAC TCAACAGCAA CCGCCAAAAA CTGAAAAACC AGCACAACCA	2100
TCTACTCCAA AAACAGGCTG GAAACAAGAA AACGGTATGT GGTACTTCTA CAATACTGAT	2160
GGTTCAATGG CGACAGGATG GCTCCAAAAC AATGGCTCAT GGTACTACCT CAACAGCAAT	2220
GGCGTATGG CGACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTATCT AAACGCTAAT	2280
GGTTCAATGG CAACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTACCT AAACGCTAAT	2340
GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2400
GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2460
GGTGATATGG CGACAGGTTG GGTGAAAGAT GGAGATACCT GGTACTATCT TGAAGCATCA	2520

910

GGTGCTATGA AAGCAAGCCA ATGGTTCAAA GTATCAGATA AATGGTACTA TGTCAATGGC	2580
TCAGGTGCCC TTGCAGTCAA CACAACGTGA GATGGCTATG GAGTCAATGC CAATGGTGAA	2640
TGGGTAAACT AAACCTAATA TAACTAGTTA ATACTGACTT CCTGTAAGAA CTCTTTAAAG	2700
TATTCCCTAC AAATACCATA TCCTTTCAGT AGATAATATA CCCTTGTAGG AAGTTTAGAT	2760
TAAAAAATAA CTCTGTAATC TCTAGCCGGA TTTATAGCGC TAGAGACTAC GGAGTTTTTT	2820
TGATGAGGAA AGAATGGCGG CATTCAGAG GCTCTTTAAG AGAGTTACGG GTTTTAAACT	2880
ATTAAGCCTT CTCCAATTGC AAGAGGGTTT CAATCTCTGC CAGGGTGCTG GCTTGCGAAA	2940
TGGCTCCACG GAGTTTGGCA GCGCCAGATG TTCCACGGAG ATAGTGAGGA GCGAGACCGC	3000
GGAATTCACG AACTGCGACG TTTTCTCCTT TGAGGTTAAT CAATCGTTTC AAGTGTTCTG	3060
AGGCGATCTT CAICTTGTCT TCAAAGGTCA AATCAGGTAG GATTCTCCTT GTTTCAAAGT	3120
AATGGTTGAT TTGGTTGAAG AGGTAAGGAT TTCCCATGGC AGCTCGGCCA ATCATGACTG	3180
CGTCAGCACC AACTTCTTCG ATGCGTTGCT TGGCTTCTTG GACAGTACGG ATATCACCGT	3240
TGGCGATGAA TGGAACTCTG GTTAGAGCTT GGGCAACCTT GTAAAGGGTC TCAAGGTCTG	3300
CGTGCCCACT ATACATTTGT TCACGGGTAC GGCCATGCAT GGCAGGGGCA GAAACACCTG	3360
CAGCTTCAGC AGCGAGAGCA TTTTCTACTG CAAGAGATGG GTCCGCCCAG CCGGTACGCA	3420
TTTTGACACT AAGTGGGATA TCAAGGACAG ACTGGACCTT GTTGATGATG GAGTAAATCT	3480
TGCTTGATC CTTGAGCCAC ATAGCACCAG CTTCTTCTT CACGATTTTG TTGACAGGGC	3540
AGCCCATGTT GATATCGACG ATATCGGTCT TGGTGTTTTC TTGGATGAAT TCTGCTCGC	3600
GTGCTAGGCT GTCTTCATCG CTACCAAAAA GTTGATAGA GACAGGGTTT TCGCCCTCAT	3660
CGATATGAAG CATGTGCAGG GTTTTTTCGT TGTGTATTTG GATTCCCTTG TCAGAGACCA	3720
TTTCCATTAC AACGAGTCCA GCTCCGAGCT CCTTGCGAT AGTACGAAAG GCTGAGTTGG	3780
TCACGCCAGC CATAGGCGCT AAAACGGTAC GATTGGGAAT CCAATATTG CCAATCATAA	3840
AAGGTGTATT AAGATTGTG ACGAATGAGT TCCTCCAGGT CCTTTTCATC AAAGTTGTAA	3900
GTAGTTTGGC AGAATTGACA AGTGATTCTT GCCCCGTGGT CTTCCTCTTT CATTTCTGT	3960
AAGTCTGAGC TTGGAAGGCT GCGAAGAGCG TTCATAAAGC GTTCATGGCT ACAGTCACAT	4020
TGGAAACGGA TTTCTTCTTC AGAAAGACGC TTGTAGGCTT CGTCCCCGTA GATAGCCTTG	4080
AGGAGGGCTT CGATATGGTC GTCGCTTTCG AGAAGAGTAG AGATAGCTGG CATTTCTTGG	4140
ATGCGTTTTT CAAAGCGAGC AATCTCTTCT TTCTTGGCTC CTGGCAAGAC TTGAACTAGG	4200
AAACCACCTG CAACCTTGAC CTTGTCTTCC TCGTCCAAAA GGACATTGAG GCCGACCGCT	4260
GAAGGCGTTT GTTGGCTTTC AGTAAGGTAA AAGGCAAGGT CTTCAACCGAT TTCTCCAGAG	4320

911

ATGAGGGGAG TTATAGAGTT GTAAGGATTT CCAGTACCGT AGTCTGTGAT AACGAGGAAT	4380
TGACCATTTC CAACAAAAGG TCCGACTAGG ACTTCACCAG TCGCAGTCTT TTTGATGTCA	4440
ACACCAGGAT TTTGAACATA GCCTTTGACG TTCCCCTTGG TATCAGCGAC GGTGATAATA	4500
GCACCTAGAG AGCTAGATCC CAACACCTTA ACTGTAAGTT TGGTATTTCC TTTTTCATTG	4560
GCTGCGAGAA TCTGGCTAGC GATAAGAGTT CGACCAAGCG CTACAGTTGA GCTAGCTTGG	4620
GTTTGATGTT TTTCTTGAGC AGTGCGGACG GTTTCAGTGC TATCAAGGAC AAAAGCACGA	4680
AAGGcTCCGC TTTCTGATAT AGTTTTAATA ATTTTATCCA TAGCTACTAT TTTAGCATAA	4740
AAATGCCCAA AGGGGGAGCC GTGTGTTTAC TGATTTTCAG GATAATGGAC CAGGAAATCA	4800
GCATGAAAAAT AAAAAGAGAA ACAGATTATT TTAGCATTTG TCAGATTTAT GCTATGCTTA	4860
AGGTAGAAAA TGAAAGGGAT AACAAATGTA TTTAGGAGAT TTGATGGAGA AAGCCGAGTG	4920
TGGTCAATTT TCAATACTTT CCTTCTATT ACAAGAGTCT CAGACGACCG TCAAGGCTGT	4980
AATGGAAGAA ACAGGATTTT CAAAAGCAAC CCTAACCAAA TATGTCACCC TGCTCAATGA	5040
CAAGGCTTTG GATAGTGGCT TAGAGCTGGC TATTCACCTA GAAGATGAAA ATCTGCGTCT	5100
GTCTATCGGT GCAGCTACCA AGGGGAGAGA TATTCGGAGC TTGTTTTTGG AGAGTGCTGT	5160
TAAATACCAG ATTTTGGTTT ATCTTCTCTA CCACCAACAG TTTTATAGCCC ATCAGCTGGC	5220
TCAAGAATTG GTGATTAGCG AGGCTACGCT TGTCGTCAC TTGGCTGGTT TAAATCAGAT	5280
TTTGTGAGAA TTTGATTTAT CCATCCAAAA TGGCCGTTGG CGAGGTCCAG AGCATCAGAT	5340
TCATATTTTC TATTCTGTG TTTTCCGAAA GGTCTGGTCG AGTCAGGAAT GGGAAGGTCA	5400
CATGCAGAAA CCAGAGAGAA AACAGGAGAT TGCCAATTTA GAGGAAATCT GCGGTGCAAG	5460
TTTGTCTGCG GGGCAGAAAT TGGACTTGGT TCTCTGGGCT CACATCAGTC AACAACTCT	5520
TCGGGTCAAT GCTTGTCAGT TTCAAGTCAT AGAAGAGAAA ATGCGAGGGT ATTTTGACAA	5580
TATCTTTTAT CTTCGTTTGC TGAGAAAGGT TCCGTCCTTT TTTGCTGGGC AACATATTCC	5640
ACTAGGAGTT GAGGATGGTG AGATGATGAT ATTCTTCTCT TTTCTCTAT CTCATCGCAT	5700
TCTTCCTCTT CATACTATGG AGTATATCTT TGGTTTTGGA GGGCAGTTGG CAGATTTACT	5760
GACGCAATTG ATTCAAGAAA TGAAGAAGCA GGAACATATG GGGGATTATA CAGAGGACCA	5820
TGTCACCTAT GAACTCAGTC AGCTTTGTGC TCAAGTCTAT CTCTATAAGG GCTATATTTT	5880
ACAGGATCGC TACAAGTACC AGTTAGAGAA TCGTCATCCA TATTTACTGA TGGAACATGA	5940
TTTTAAAGAG ACAGCAGAGG AGATTTTTC TGTCTACCT GCTTTTCAAC AGGGGACAGA	6000
TTTAGATAAG AAGATTCTCT GGGAAATGGCT CCAGTTAATC GAATATATGG CTGAAAACGG	6060

912

TGGCCAGCAT ATGCGGATTG GTCTGGATTT GACATCTGGT TTTCTTGTCT TTCAAGGAT	6120
GGCAGCCATT TTGAAACGGT ATTTGGAATA CAATCGTTTT ATTACCATG AAGCTTATGA	6180
CCCTAGTCGG CATTATGATT TGCTGGTTAC CAATAACCCG ATTCATAAGA AGGAACAGAC	6240
ACCACTCTAT TATTTAAAAA ATGACTTGGA TATGGAGGAT TTGGTAGCGA TTCGCCAGTT	6300
ATTATTCACT TAAAAGGCTT GGTAAATCCA GGTCTTTTTT CTGAAATCA CACAATCTCC	6360
TCACATTTTT TAAAAATTA AAAAAAGTTG ATAAACAAGA AAGCGCTTTA TTTTGTATAC	6420
TAGTAAGTGT AAAGAGGAAA CACCTCAAGA TCTTTATCAG GAGGACAGTA CATGTCACAA	6480
GAAAAATACA TCATGGCCAT TGACCAGGGA ACTACAAGTT CTCGTGCCAT CATTTTCAAC	6540
AAAAAAGGGG AAAAGGTTAG CTCGAGTCAA AAAGAGTTTA CCCAGATTTT CCCTCAGGCA	6600
GGTGGGTTG AGCACAATGC CAATGAAATT TCGAACTCTG TTCAGTCAGT TATTGCGGGT	6660
GCTTTCATCG AAAGTGGTGT CAAGCCAAAT CAAATCGAGG CAATCGGGAT TACCAACCAA	6720
CGTGAAACAA CGGTGTCTG GGATAAGAAA ACAGGACTTC CTATCTACAA TGCTATCGTT	6780
TGGCAGTCAC GCCAGACAGC ACCTTTGGCT GAGCAACTAA AAAGCCAAGG TTATGTGGAA	6840
AAATTCATG AAAAGACTGG TTTGATTATT GATGCTTACT TCTCTGTAC CAAGGTTCGT	6900
TGGATTTTGG ATCATGTAGA AGGTGCTCAA GAGCGAGCAG AAAAAGGGGA ATTGCTCTTT	6960
GGTACTATCG ATACTTGGTT GGTTTGGAAA TTGACTGACG GTGCGGCTCA CGTACTGAC	7020
TACTCAAATG CAGCTCGTAC CATGCTTTAT AACATTAAAG AACTCAAATG GGATGATGAG	7080
ATTTTGGAAA TCCTTAACAT TCCGAAGGCT ATACTTCCAG AAGTTCGTTC TAACTCCGAA	7140
ATCTACGGCA AGACAGCTCC ATTCCATTTC TACGGTGGAG AGGTGCCAAT CTCAGGTATG	7200
GCTGGGGACC AACAAGCAGC CCTCTTTGGA CAGTTGGCTT TTGAGCCAGG TATGGTTAAG	7260
AATACTTATG GAACAGGCTC TTTCATCATC ATGAATACTG GGAAGAGAT GCAGTTGTCT	7320
GAAAACAACC TCTTGACAAC CATTGGTTAC GGAATCAACG GTAAGGTTTA TTATGCCTTG	7380
GAAGGTTCTA TCTTCATCGC AGGAAGTGCT ATTCAGTGGC TTCGTGACGG TCTTCGCATG	7440
GTTGAAAATT CACCAGAATC TGAAAAATAC GCTCGTGATT CTCACAACAA CGATGAAGTT	7500
TATGTCGTTT CAGCCTTTAC AGGTCTAGGC GCTCCATACT GGAACCAAAA TGCTCGTGGT	7560
TCCGTCTTTG GTTTGACTCG TGGAACAAGC AAAGAAGACT TTATCAAGGC GACTTTGCAA	7620
TCTATTGCTT ATCAAGTGCG TGATATCATC GACACCATGC AAGTGGATAC TCAGACCGCC	7680
ATTCAAGTAC TGAAGGTGGA TGGTGGTGCA GCCATGAACA ACTTCCTCAT GCAGTTCCAG	7740
GCGGATATTT TAGGCATTGA CATTGCACGT GCTAAAAACC TGGAAACAAC AGCTCTAGGA	7800
GCGGCCTTCC TAGCAGGTTT GTCAGTAGGG TACTGGAAAG ACTTGACGA GTTGAAACTC	7860

TTGAACGAGA CAGGAGAACT CTTTGAGCCA TCTATGAACG AATCTCGCAA GGAACAACCTC	7920
TACAAGGGCT GGAAGAAGGC TGTGAAAGCA ACTCAAGTCT TTGCCGAAAGT AGACGACTAA	7980
TACTGGCAGA ATAAAGCGAT TTATTTAGAA AGTGTGTAAA TATGGAATTT TCAAAGAAAA	8040
CACGTGAATT GTCAATTAAA AAAATGCAGG AACGTACCCT GGACCTCTTG ATTATCGGTG	8100
GAGGAATCAC AGGAGCTGGT GTAGCCTTGC AGGCGGCAGC TAGCGGTCTT GAGACTGGTT	8160
TGATTGAAAT GCAAGACTTT GCAGAAGGAA CATCTAGTCG TTCAACAAAA TTGGTTCACG	8220
GAGGACTTCG TTACCTCAA CAATTTGACG TAGAAGTGGT CTCAGATACG GTTCTGAAC	8280
GTGCAGTGGT TCAACAAATC GCTCCACACA TTCCAAATC AGATCCAATG CTCTTACCAG	8340
TTTACGATGA AGATGGAGCA ACCTTTAGCC TCTTCCGTCT TAAAGTAGCC ATGGACTTGT	8400
ACGACCTCTT GGCAGGTGTT AGCAACACAC CAGCTGCGAA CAAGGTTTTG AGCAAGGATC	8460
AAGTCTTGGA ACGCCAGCCA AACTTGAAGA AGGAAGGCTT GGTAGGAGGT GGAGTGTATC	8520
TTGACTTCCG TAACAACGAT GCGCGTCTCG TGATTGAAAA CATCAAACGT GCCAACCAAG	8580
ACGGTGCCCT CATTGCCAAC CACGTGAAGG CAGAAGGCTT CCTCTTTGAC GAAAGTGGCA	8640
AGATTACAGG TGTGTAGCT CGTGATCTCT TGACAGACCA AGTGTTTGAA ATCAAGGCCC	8700
GTCTGGTTAT TAATACAACA GGTCCCTTGA GTGATAAAGT ACGTAATTTG TCTAATAAGG	8760
GAACGCAATT CTCACAAATG CGCCCAACTA AGGGAGTTCA CTTGGTAGTA GATTCAAGCA	8820
AAATCAAGGT TTCACAGCCA GTTTACTTCG ACACAGGTTT GGGTGACGGT CGTATGGTCT	8880
TTGTCTCCC ACGTGAAAA AAGACTTACT TTGGTACAAC TGATACAGAC TACACAGGTG	8940
ATTTGGAGCA TCCAAAAGTA ACTCAAGAAG ATGTAGATTA TCTACTTGGC ATTGTCAACA	9000
ACCGCTTCCC AGAATCCAAC ATCACCATTG ATGATATCGA AAGCAGCTGG GCAGGTCTTC	9060
GTCCATTGAT TGCAGGGAAC AGTGCCTCTG ACTATAATGG TGGAAATAAC GGTACCATCA	9120
GTGATGAAAG CTTTGACAAC TTGATTGCGA CTGTTGAATC TTATCTCTCC AAAGAAAAAA	9180
CACGTGAAGA TGTGTAGTCT GCTGTCAGCA AGCTTGAAAG TAGCACATCT GAGAAACATT	9240
TGGATCCATC TGCAGTTTCT CGTGGGTCTA GCTTGGACCG TGATGACAAT GGTCTCTTGA	9300
CTCTTGCTGG TGGTAAAAATC ACAGACTACC GTAAGATGGC TGAAGGAGCT ATGGAGCGCG	9360
TGGTTGACAT CCTCAAAGCA GAATTTGACC GTAGCTTTAA ATTGATCAAT TCTAAAACTT	9420
ACCTTGTTTC AGGTGGAGAA TTGAACCCAG CAAATGTGGA TTCAGAAATC GAAGCCTTTG	9480
CGCAACTTGG AGTATCACGT GGTTTGGATA GCAAGGAAGC TCACTATCTG GCAAATCTTT	9540
ACGGTTCAAA TGCACCGAAA GTCTTTGCAC TTGCTCACAG CTTGGAACAA GCGCCAGGAC	9600

914

TCAGCTTGGC AGATACTTTG TCCCTTCACT ATGCAATGCG CAATGAGTTG ACTCTTAGCC	9660
CAGTTGACTT CCTTCTTCGT CGTACCAATC ACATGCTCTT TATGCGTGAT AGCTTGGATA	9720
GTATCGTTGA GCCAATTTTG GATGAAATGG GACGATTCTA TGA CTGGACA GAAGAAGAAA	9780
AAGCAACTTA CCGTGCTGAT GTCGAAGCAG CTCTCGCTAA CAACGATTTA GCAGAATTAA	9840
AAAATTAAGA AAAAATAAAA GAGGTGGAGG GCAGCATTCC TTGTCGCCCC TCCCTTCTTT	9900
TTAATGGAGA CAGAAAGATG ATGAATGAAT TATTGGAGA ATTTCTAGGG ACTTTAATCC	9960
TGATTCTTCT AGGAAATGGT GTTGTTCAG GTGTGGTTCT TCCTAAAACC AAGAGCAATA	10020
GCTCAGGTTG GATTGTGATT ACTATGGGTT GGGGGATTGC AGTTGCGGTT GCAGTCTTTG	10080
TATCTGGCAA GCTCAGTCCA GCTTATTTAA ACCCAGCTGT GACCATCGGT GTGGCCTTAA	10140
AAGGTGGTTT GCCTTGGGCT TCCGTTTTCG CTTATATCTT AGCCCAGTTC GCAGGGGCCA	10200
TGCTGGGTCA GATTTTGGTT TGGTTGCAAT TCAAACCTCA CTATGAGGCA GAAGAAAAATG	10260
CAGGCAATAT CCTGGCAACC TTCAGTACTG GACCAGCCAT CAAGGATACT GTATCAAAC	10320
TGATTAGCGA AATCCTTGA ACTTTTGTGTT TGGTGTGAC AATCTTTGCT TTGGGTCTTT	10380
ACGACTTTCA GGCAGGTATC GGAACCTTTG CAGTGGGAAC TTTGATTGTC GGTATCGGTC	10440
TATCACTAGG TGGGACAACA GGTATGCCT TGAACCCAGC TCGTGACCTT GGACCTCGTA	10500
TCATGCACAG CATCTTGCCA ATTCCAAACA AGGGAGACGG AGACTGGTCT TACGCTTGGA	10560
TTCTGTGTT AGGCCCTGTT ATCGGAGCAG CCTTGGCAGT GCTTGATTC TCACTTTTCT	10620
AGTTTATACT CTTGAAAAT CAAATTCAA CCACGTCAGC GTCGCCTTAC CGTACTCAAG	10680
TACAGCTTGC GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAT TAGAAAAACA	10740
TTATGTTGAT AGAGCTTGGG CAAGAGCCCA ATTTAGCAA AAAATGAAGT AAATCTTCTC	10800
ATAATAAAAC GCATCATATC AAGCACGAAA ATTCCACGAG GTCAACTACA GTCAGAAAGC	10860
TGAACAACAA GCCAAAACGC CCAAAAAGG CGGCAAAAAG CAAGCACCTG CAAGCAACGT	10920
GCCGAAATGG TCAAATCCTG ATTATGTCAA CGAATTAGAC CCAAAAATCG TTGATATGCT	10980
AGTAGAATTT CACAAGTCAC AAGGCACTTT GGAAACTCCC GAGGCGCAAG CAGAAATCGC	11040
CCAAAACGT GAAGAAATCG AGCAAAGGAG AGCTGAGCTT GAGGGTAAAA AACAAGAGCT	11100
TTTGAACCGC TTGAACAAAT AGAGTTTCGC AAGTATTATG CTTACAAATT ACTTGAGCAA	11160
TTAACTAAAA TATAAACCTT GCCTTTATAT CTAGGCAGGG TTTATATTTT AGAAATTCAC	11220
GTAGGTTGTT ACGGTTTTTA CATACCCAGT ATAGTTTGAG TTTCTATAGT ATTCAGTGAT	11280
AAACTTCCAT TTTCTTTGAG CAACATGGAT ATAAGTACTT GTTATGTAGT ATGGATATGG	11340
GCTTTGTGAA TCCAAGTAAG ACTGATAAGC TTGTATACCA AAATATGCTC CACCAATTAT	11400

915

TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC 11460
 ACCAGTCATG AAGTTAGCGA ATGTGTTAGC TTGTTTATTC CCATGTATTG TGTGACGTA 11520
 ATTCCAAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTCGATTT CATTCCTTTG 11580
 ATAAGCCATA TAAAATGCCC CATTGATATA GACGCCGTCA GCACGTCGTT CAATAGTGTC 11640
 TACACTTCCA TCTGGATTGA CAACCTCAAG AACTTCATCG CTTAAATAT TTAAGTTCGT 11700
 ATCTCCGAAC CGCACTGATG AGCCATTCTC AACTGAGCC TCACCAGATA CAACTTTAGA 11760
 GTTTGCCGAT AAGCTATCAT CAGCAAAAAC AAACAAGCGA CGGGGAAATG CTAGACATAC 11820
 AGAAAAACAGA CATAACTAGC AAACACATGC ATTTAAACAT CTAGACATA ACGGAACTC 11880
 CTTTGTATTT TTGATTTTTT TCAACTTTTA TTATACAATA AAACCAAATA AAAAGAAAGC 11940
 GGTAACAATA TGCTTAATGC GAAAATTTTT TATATATTTT TATGTTTGAT CGTTATCGAA 12000
 ACTACAGGCT TGTGTGTGTT GAAAAGAGGT CTCGAAATGG GTTATTTAGA CACAGAAGCT 12060
 ATTAATCCTCG CAGTTTTTTC ATTTGCTTTT TACAACCTAT GTTCATTCGC TTGGGTCTGC 12120
 TCTACAATAA AAAACAATAA AAAATAAATA GACGTATTTT CAAAAAAAC maAATGCATA 12180
 TTTATATTAG CAAAACGACG ATTTAAATCG TCGTTTTTTT GTAGTACGAC GGGCATGTCG 12240
 TATATCTGAG GTGTAAGTCC TCAGCCTGAC TATCGTGAGG TAGCAGGGAG AGGAAGGGAT 12300
 AGCGAAATCG TGGCTCTACG AACAGGAACG TGATAGTAAG GCGTATATAG CGGATAAGGA 12360
 GGCTTCAAAC TCTAAAGTCC AAAAAGGTAG TCGTAACCTA TATGTGTAAA TCACGAGAGT 12420
 AATTGAATTC GGACTAAGGT TTGTGTGAAA AAGATAAATC TTTCTAGAGT CTAAAGACTC 12480
 TCGGTCAGAT TTCCTATTTT CACTGTAACC TTTTAACGTC CTCATATCTT GTATAAACGA 12540
 GGAAAGATGT ACGACTTATC CCGTGAGGTT TCATGAGCGT GAAAGCGTAG TAACAACGAA 12600
 TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAACTT CCGTAATGGA AGTGGAGCGA 12660
 AGGGG 12665

(2) INFORMATION FOR SEQ ID NO: 135:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5305 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

CGCTAATCAC TACAATCATT TTATTGTACT TTTTCACTCT CAAGAAAAGC AAGAAGTATT 60

916

CATTTTAGTT TCATTAGTA TTATTTTGCA TACCTAAAAAT ACAGTAAAAA ATCAGTCAATC	120
TTGGTATGCT CCTGCTTTCA CTATTCAACA CGTTTTTGAC TTATACTAGG CTCATTTCCTA	180
AAAGCATTAT ATAATAGTGA TATGAAACCA ACTAAACTAA ACAAGAAATA TAAGCAATAA	240
AAATTCGTTT AAAAGATCTT ACTAAAGCTA ATACTAAATA AAAATAAAAG AGTAAACTAG	300
GAAGTTTATT TCAAACAACC TAAAATACTG ATTTTCGGCT GAAGATAATA CTGGAGTGCA	360
AATTAATGGG GTTATAATAA ATAGCTGATA GCTTGIGTTG GTTTTGGATT TTTTAAGAGT	420
AGATGAGTAT TAAAACTATA AGGAGGACGA AGGTGGCTAA AAATTTAAAA TAAAAATTAG	480
CTCGGGTAGA GCGTGATTTA ACACAAGGTC AACTGGCAGA GGCTGTCGGG GTGACACGCC	540
AGACTATTGG TTTAATAGAG GCGGGAAAAT ACAATCCAG TCTCTCGCTC TGCCAGTCTA	600
TTTGCAGATG TTTAGGGAAA ACCCTAGACC AACTATTTTG GGAGGAAGAA GATGAAAAAT	660
AGATTTTATT ATTCTCAATT ACTAGACGAA AGAGAAGAAC AACTGTTCAA TAAAGCGGGC	720
TCTGAAAGTT TCTATATCTG CATTGCTTTG TCGCTCCTAT CTTATATCAT TTCAGTATTA	780
GCACCAAGCC TTTTAAATTC TAATATGCTG CTAATCGTTA TCATCATAGG GACATTTTAC	840
TTTTTCAATC GTGCCCCTTA TCTGGGAGTG ACCTACTATG GTCGTTTCA TTTTACGATT	900
TTGGGTGCTT TTTTCCTAAC CTTGGCTATT ACGGCTCTTT TGATGTTGCA GAATTATCAA	960
TTCAACATAG AAATTTATCA GCACAATCCT TTGAATTTTA AATACCTGTC TGCTTGGGTC	1020
ATTACTTATA TCATTTACCT TCCGTGGATC TTTATGGCA ATCTTGGTCT TAAGAGCTAT	1080
GGCGAATGGG CTCAGAAAAA ATTTGAACAA GATATGGATG AATTGGAGAG TGGAGAATAG	1140
CTTGTTACTC TTTTCTCAAT CCAGCTAAAA TGTGATATAA TAGTACTAAT TTATTGGAAT	1200
ACATGAAAGT TCTTGAAAAA TTTTCATGGT TTCTAGCTAA GGAAGTAGGA AAAGTATGTA	1260
TCCAGATGAT AGTTTGACAT TGCACACGGA CTTGTACCAG ATCAACATGA TGCAGGTTTA	1320
CTTTGACCAA GGGATTACCA ATAAGAAGGC GGTCTTTGAG GTGTATTTCC GCCAACAGCC	1380
TTTTAAGAAC GGCTATGCGG TTTTTCAGG TTTAGAAAGA ATTGTGAACT ATCTTGAAGA	1440
CTTGCGTTTT TCAGATAGTG ATATAGCCTA TTTGGAGTCG CTTGGTTATC ATGGGGCGTT	1500
CTTGGATTAC CTTGCAATT TCAAGTTGGA GTTGACCGTT CGTTCGCCC AAGAAGGGGA	1560
TTTGGTTTTT GCTAATGAAC CGATTGTGCA GGTGGAAGGA CCTCTAGCCC AATGTCAGTT	1620
GGTCGAAACG GCTCTTTTGA ACATCGTCAA CTACCAGACT TTGGTGCGA CGAAGGCAGC	1680
TCGTATTCGT TCGTTATCG AAGATGAACC CTTGATGGAG TTTGGGACAC GTCGGGCTCA	1740
AGAAATGGAT GCGGCCATCT GGGGAACACG CGCAGCTGTG ATTGGTGGCG CCAATGGAAC	1800
CAGCAACCTG CGTGCGGTA AGCTCTTTGA CATTCCTGTT TTGGGAACCC ATGCCCATGC	1860

917

CTTGGTACAG GTTTATGGCA ATGACTATGA AGCTTTCAAG GCTTACGCTG CGACCCACAA	1920
AAATTGTGTC TTTCTTGTGG ATACCTATGA CACCCTTCGC ATCGGTGTAC CAGCTGCCAT	1980
TCAGGTGGCG CGTGAGCTGG GTGATCAGAT TAACTTTATG GGTGTGCGGA TTGACTCTGG	2040
GGATATTGCC TACATTTCTA AGAAAGTCCG TCAGCAACTG GATGAGGCTG GATTTACAGA	2100
GGCTAAGATT TATGCTTCTA ATGATCTAGA TGAAAATACC ATCCTTAACC TCAAGATGCA	2160
AAAGCCAAG ATTGATGTCT GGGGTGTGGG TACCAAGCTG ATTACAGCCT ATGACCAGCC	2220
GGCTCTTGGG GCGGTTTACA AGATTGTTGC AATCGAAGAT GAACTGGTC AGATGCGCAA	2280
TACGATTAAG CTGTCTAATA ATGCTGAAAA AGTTTCTACG CCAGGTAAGA AGCAGGTGTG	2340
GCGCATTACC AGTCGTGAAA AAGGCAAGTC AGAAGGCGAC TATATCACTT ATGATGGTGT	2400
GGATATTAGC GACATGACAG AAATCAAGAT GTTCCATCCG ACCTATACAT ACATCAAGAA	2460
GACGGTTTGT AATTTTGATG CCGTTCCTCT CTTGGTGGAT ATCTTCAAAG AAGGAATATT	2520
AGTTTACAAC TTGCCTAGTT TGAATGACAT TCAGGATTAT GCCCGTAAGG AATTTGACAA	2580
GTGTGGGAT GAGTATAAGC GTGTGCTCAA TCCGCAGCAC TATCCAGTGG ATTTGGCGCG	2640
TGATGTATGG CAAGATAAGA TGGACTTGAT TGATAAGATG CGCAAGGAAG CCCTTGGTGA	2700
AGGAGAAGAA GAATGAGTTT GCAAGAAACG ATTATCCAAG AGCTGGGTGT CAAACCAGTG	2760
ATTGATGCCC AGGAAGAAAT CCGTCGTTCT ATTGATTCTT TAAAAAGATA TCTGAAAAAA	2820
CATCCCTTCC TAAAAACCTT TGTACTAGGG ATTTCTGGGG GACAAGACTC AACCTTGGCA	2880
GGACGTTTGG CGCAATTAGC TATGGAAGAA CTGCGAGCTG AACCGGAGA CGATAGCTAC	2940
AAATTTATCG CTGTCCGCCT GCCATACGGA GTGCAAGCTG ATGAAGCAGA TGCTCAAAAA	3000
GCCCTAGCCT TCATCCAGCC AGATGTCAGC TTGGTTGTGA ATATCAAGGA ATCAGCTGAT	3060
GCCATGACAG CTGCAGTTGA AGCGACAGGT AGTCCGTGTT CAGACTTCAA CAAGGGGAAT	3120
ATCAAGGCAC GTTGCCGTAT GATTGCTCAG TATGCCCTTG CTGGTTCCCA TAGCGGAGCG	3180
GTCAATTGAA CAGACCACGC CGCGGAAAAT ATCACAGGTT TCTTTACCAA GTTTGGTGAC	3240
GGCGGTGCGG ATATTCTCCC TCTTTACCGC CTCAATAAAC GCCAAGGAAA ACAGCTCTTG	3300
CAGAAACTTG GCGCAGAGCC AGCCCTTTAT GAAAAATCC CAACGGCAGA CCTAGAAGAA	3360
GATAAACAGC GCCTAGCTGA CGAAGTCGCA CTTGGAGTCA CCTACGCAGA GATTGACGAC	3420
TACCTAGAAG GCAAAACAAT CAGCCCAGAA GCTCAAGCGA CCATTGAAAA CTGGTGGCAC	3480
AAAGCCAAC ACAACGCCA CTTACCCATC ACCGTATTTG ATGACTTTTG GGAGTAAAAA	3540
GGTCCGGGGG ACCTTTTATG CTTCTTGCCC TGAAATTAAA AAGCAAGAAA AACCTCCACT	3600

918

GGAGGTTTTTC AGCCTCTCAT CTTGAAATAA GAAAGTGAGA GAAGGTCTGG GGGATCTTGA	3660
ACCCCGAGTT TAGAAATAAG AAAATGAGGC AGATTCAGTA ACTCGAAGAG TTCGATTTCA	3720
TCGTCTTACC CCTGCAACGA TGA CTAGGTT TGAAAAAGCT TGCTAGAGCG CATTTCAAAC	3780
CAGGCAGCAA CTGCGTCAAG AAATTAGAAG ACAAACTCGT TTTCTAGCTG TTA CTAGGTT	3840
GAGCCTTTTT ACTACGAGTA TAGAAATAAG GAAGTGAGGT AGCATCATGA AATCTATCGG	3900
TACGCAAATA TTACAGACAG AACGTTTGAT TTTAAGAAGA TTTGTGGAGA GTGATGCAGA	3960
AGCCATGTTT CAAAATTGGG CTT CATCCGC TGAGAACTG ACCTATGTTA CCTGGGATCC	4020
CCATCCTGAT GTCGAAATCA CTCGAACTC GATTTGCAAT TGGGTGCTT CCTATACTAA	4080
TC TCACTAT TATAAATGGG CCATTTGTCT AAAAGAAAAC CCAGAGCAAG TAATAGGAGA	4140
TATCAGCATT GTTAAGATAG ACGAGGCTGA TTTAAGCTGT GAAATTGGCT ATGTGTTAGG	4200
CAAGGCTTAC TGGGAAATG GTATGATGAC AGAGACTTTG AAAGCTATCT TGGACTTTTG	4260
TTTTACTCAA GCAGGTTTTT AAAAGGTCAG AGCACGTTAT GCCAGTCTCA ACCCAGCTTC	4320
AGGTCGTGTC ATGGAAAAGG CTGGAATGTC CTATCTACAA ACCATTGTTA ATGGTGTAGA	4380
GAGAAAAGGC TATCTTGCGG ATCTTATTTA TTATGGTATA AGTAGGGAAG AATGTTGAAT	4440
TCTATTTTCT GTTTCTATCG AAGTCAACTA TTTATTGTAA ATATAATAAT TAGCATTTCA	4500
AGTTTATTTG AAACTTTAAA ATAGCATATT GATTAGTACA AGACAGATGT TCTAGTTCCT	4560
TC TTTAATCT GGT TTAGTGT TAGTTAAAAA ATCGCTTTAA GCTTGTA ACT AAGAGGGAGC	4620
TAATCGACTA GATTCTCCAG CCGAACAGGI GGTAATGTAC TTTTATAGT GTAATCCTAG	4680
CTGTGTGTAA ATTTAAAATA GAATCCTCTA TCGAGTTAGG GAATTAAATT CAACCAATTT	4740
TATTCATGTT TTTTCTATCA AATTATCTAA TATTAAAATA GTCTCATTTCT GATGAGAAAA	4800
CTATTTCCAA ATCATT CATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCCTGACCTC	4860
ATGAGCCACT TTCTTCCTCC TCATGAGGTC AGTTTTACTT TCTGCTGTTC CAGTATCGTT	4920
TTTCCTCGCT AGATTTCTCC AAAAGGGCAG ACTCCTCCCT TGGTGCCTCA CACGATTTTT	4980
TCATCTCGAC TGTCTTTTAA TGCATCATTA ACGACGCTTT TCTTCTAGGT GGTTCATAAG	5040
GAACAGGAAG ATTCAGGTTG ACTTTTCTAA TCCTAGAATA AAGTGCTGAA AACAAATTCGG	5100
AATAGGCATA GAGACTAGAC AATTGAGGA GCTGCTTGCG TCCTGTTCGA ACACATTTTC	5160
CCACCACGTG AAGAAAAAGA TGGCGGAAGC GTTTGATTGT TAAAGTTTGG AAGTCACCTC	5220
CAGCTAGATG TTTGAGAAAA AGATAGAGAT TG TAGGCGAT ACAGCTCATC ATCATACGAA	5280
CTTCGTTTTT GATTAAGGTT GAACT	5305

(2) INFORMATION FOR SEQ ID NO: 136:

919

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3964 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

TGGCAGCTCG TCGTCGTAAA GGACGCAAAG TTTTGGCTGC ATAATCCAAA CGAATTCCTAT	60
CAAAAATCAG TAGGAACCTCG AGTCTACTGA TTTTATTTT TGTA AAAAAG TTCAGTAGAT	120
GCAAATGGAT TCGGAAGCGA TGTACAGTA GATTGAACT AGAATAGTAC ACCTCTGTTT	180
CTAAACATT GTTAGAAATC GATTGACTG TCCTGATCGA TTGTCCTCT TATTATTTTA	240
TTTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCAA CAATCGTCTT TAAAGATGGT	300
TCAGCTATTA CAATCCAGG AAATCAATTG GTAGCACAAG ATCCAAAAGC ACAAGATAGC	360
ACTAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA	420
GATATAACTC ATTTAACAGA TGAAGAAAA GTTAAGGTTG CTATTTTACA AGCAAATGGT	480
TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC	540
CCAGATGGTT CAGTAGTGAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAAGGT	600
GAATCTGTAA CTCAAGAAGC TACACCAGAG TATAAGCTAG AAAATACACC AGGTGGAGAT	660
AAGGAGGCA ATACTGGAAG CTCAGATGCT AATGCGAATG AAGGCGGTGG TAGCCAGGCG	720
GGTGGATCAG CTCACACAGG TTCACAAAAC TCAGCTCAAT CACAAGCTTC TAAGCAATTA	780
GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAGGA CAAGCAGGAT	840
GAAATCAAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA	900
GCAGAAAAAC AAGCAGCTCT CAAAGAGATT GAAAATGCGA AACTATGGA AGATGTGAAG	960
GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG	1020
GCTCCTAATG CTGCTCCTAA GACAACAAGT GCACCGCAAG CAACTGCAGG AACAATGCAA	1080
GATGTTACCT ACCAGTCACC TGCTGGCAAA CAATTACCTA ACACAGGTTT AGCATCAAGT	1140
GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA	1200
AAGACTAGAC GTAGAAAATA GAACAGCTAG AAAATCTAT TCTCTACTTA AAGTTAGATT	1260
ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAGT GAGAACCCTAA	1320
GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA TGAGCCAAT CTCTCTGTC	1380
TCTAACTGTG GAATAGGAGA TGGGCAATAT CGGATAGAAA AGATAGCAGA ATAGCTCTCT	1440

920

ATTGAAGAGA GGAGGGGAAA CCGAAAAATT AGGTGCCCCCT CCTCTTTTTT GGTATAATAG	1500
AAGATAGAAA ACGAGGTAG AAGAGATGAT TTTTGATACA CATACACACT TGAATGTAGA	1560
AGAATTTGCA GGTCTGTAGG CAGAAGAAAT TGCCTTGGCT GCTGAGATGG GTGTGACACA	1620
GATGAATATT GTTGGTTTTG ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA	1680
GTATGAGCAG CTCTATGCCA CTATTGGTTG GCATCCTACA GAAGCTGGTA CTTATACAGA	1740
GGAAGTTGAG GCTTACTTGT TGGATAAGTT AAAACATTCC AAGGTTGTGG CTTTAGGTGA	1800
AATTGGCTTA GATTACCATT GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG	1860
CCGTGAGATT CAGCTATCTA AGGACTTGGA TTTGCCTTTT GTTGTCCATA CCCGTGATGC	1920
GCTGGAAGAT ACCTATGAGA TTATCAAGAG TGAGGGCGTT GGTCTCGTG GTGGTATCAT	1980
GCATTCAATTT TCAGGGACGC TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT	2040
TTCCCTCTCA GGAGTGGTA CTTTAAAGAA GGCAACTGAC CTCCAAGAAG CAGCTAAAGA	2100
GTTACCTTTG GACAAGATGT TGGTGGAAAC AGATGCGCCT TACTTAGCAC CTGTACCCAA	2160
GCGTGGTCGT GAAAATAAAA CAGCCTATAC TCGCTATGTG GTCGACTTTA TCGCTGACTT	2220
GCGTGGTATG ACGACAGAAG AGCTGGCGGT AGCAACGACT GCAAATGCAG AACGAATTTT	2280
TGGACTGGAC AGCAAGTAAT GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGGCGT	2340
GATGATACGG TCAATCTCAA ACGTTATTTC GATGTGGAGA CCTATGAGAC TCGAGGTTCT	2400
GCCATCAATG CTCAGGATAT AGAGCGGATT CAGCGCCTGC ACCAACGTCA TGGAGTCATT	2460
GTCTTTACAG ACCCAGATTT TAATGGGGAA CGGATTCGGC GCATGATCAT GATGGTCATT	2520
CCAACAGTTC AGCATGCCTT TCTCAAGCGA GATGAAGCTG TTCCCAAGTC CAAGACCAAG	2580
GGGCGTTCTC TGGGAATTGA GCATGCCAGC TATGAAGACC TGAAAACGGC TCTAGCTCAA	2640
GTGACAGAAC AATTTGAACA TGAGAGTCAG TTTGACATTA GTCGTAGCGA TTTGATTTCG	2700
CTTGGTTTTT TAGCAGGGGC AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC	2760
CGAATCGGCT ATTCCAACGG CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTTACT	2820
TTGGCAGAAG TGGAAGAAGC TATGAAATCT TATGAGTAGG AAAGATGTAG CCGTTACAAT	2880
TTTTTAAGTT TCACAGTATT TTTCGAAGCA GGTAGAAGAG GAGGCGTCTG ATGTTAATTG	2940
GTCAAAAAAT TAAAGAGATT CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG	3000
ATGAGCAAGA ACTGACAGTT CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA	3060
GTTTGCCCAA GTTAGACTAT ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC	3120
CGGATTTTTT AGCTCTTCCT TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC	3180
CAATCTATGG TAAAGAAGAG GAGTACGATA AGAAGGAAGC GTGTTTGGA GAGATTTATA	3240

921

AAACATACTT TGATAATCTT CCTAAAGAAG AACAAATTAGC ATGTGAAGTA TTGCAGGCGT	3300
GTTTGGATAC TTCTAGAAGT AGAAGGCCTG AATATGCAGA GTTAATACTT GAGGAACATA	3360
TGCCTCAGAT TATAGAAAAA GAAGCTTATT CAATAAATGA TATGTTGTTG ATTCGTTTGT	3420
TTTTTTATCA AATGCTCATT AGAAAAGATC TTGCCAAATT TATAAATCAA ATCGAAAAGC	3480
TAATGCTCTT TCTTTTGGAA CAGAAGAAGG TAACTCAAAT AGAGAATTAC TTTATAATTA	3540
GAGATACTCT TATTTCAGGA ATGTGTTGTC TTGAAAAGGT AGGAGTAACT GATTGTTTTA	3600
ATGATTATCT ATCGTGTTTA CAAGAAATTA TGGATAAAAC TCAAGATTAT CAAAAGAAAC	3660
CTCTTGATTT TATGTTTTTG TGGAAAGCAAG CATTAAGAGA AGAAAGAGAT TTTAGTTTAG	3720
CTGAATCATT TTATCAGTCT TCTAAAACAT TTGCGCAGCT AATTGGAGAT GAATTTCTAG	3780
TAAAGAAATT GACAGAGGAA TGGCAAGAGG ATGTCAAAAA ATATTTATAA ACATAGTGAA	3840
TCAGTGACAA AGATGTCCTT GTCCTCGTAT CAAAACAGTT CTAAAGTTTC TCTTTAGGGA	3900
TGTTTTTTTA GATATAAGCT AAAAATGACA CGAAATGGTT AGATTTTAAG GACATTGATG	3960
TCCG	3964

(2) INFORMATION FOR SEQ ID NO: 137:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12666 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT ATTTGTATTA GGGAAATGGG TATCTATTTT TAATGCTGTG GGGATTTTGA	60
TTGTTTCTAT TATTCAAACC AAAAGCTTGT CAGGTATTGG AGCAGGATTG TTTAATCTAT	120
ATAACATTTC ATCTTATATA GGTGATTTAG TTAGTTTCAC TCGATTGATG GCATTAGGAT	180
TATCTGGAGC AAGTATAGCA TCAGCTTTCA ATTTAATTGT TGGTTTGTTC CCGGAATAT	240
TGGCTAAACT GACAATTGGA TTAGTATTAT TCATTCTTTT ACATGCCATC AATATTTTTC	300
TATCGTIACT ATCAGGATAT GTTCATGGAG CACGTCTGAT ATTTGTGAA TTTTITGGTA	360
AGTTTATGA GGGTGGAGGA AAACCATTTC AACCTTTGAA GGCTTCTGAG AAATATATTA	420
AGGTTATTAC AAAGAATTAA TGGAGGATAT ATATAATGGA ACATTTAGCA ACTTATTTT	480
CAACCTATGG AGGAGCTTTC TTCGCTGCAT TGGGAATTGT ATTGGCGGTT GGATTAAGCG	540
GTATGGGGTC TGCTTATGGA GTTGTAAGG CTGGGCAATC TCCCGCAGCT TTAAGTAAAG	600

922

AACAGCCTGA AAAGTTTGCC TCAGCTTTGA TATTGCAATT ATTGCCCGGA ACACAAGGAT	660
TATATGGTTT TGTATTGGA ATTTTAATTT GGTGCAATT AACTCCAGAA CTTCTTTTAG	720
AAAAAGGCGT TGCTTATTTT TTTGTAGCTC TTCCAATTGC TATTGTAGGA TACTTTTCAG	780
CTAAGCATCA AGGAAATGTA GCAGTAGCGG GAATGCAAAT CTTGGCTAAA AGACCAAAAG	840
AATTCATGAA GGGAGCAATT TTAGCTGCCA TGGTAGAAC CTATGCAATT CTGCTTTTG	900
TCGTATCATT CATTTTGACC CTTCTGTAT AAGAAATAAA TTTGCAATTC AAAGGAGGTG	960
TCTAAATGAG CAATTTAGAA AACTTACGAG AGTCTGTTAT TGAACAAGCT CATGAAAAAG	1020
GGCGTATGAA ATTATTGGAT TCCAAAAAGA AGATTGATGA TGAATTTGAA ATGCAAAAGT	1080
CGCTCATTAT AAAGAAAAA GAAGCTGAAC ATGAACGAAA GTTAAAAGAA TTGCAACAGA	1140
AATATCAAAT AATTTTTCAA CAATTAAAA ATAAGGAACG CCAATCAACG TTAGTATCAA	1200
AACAGAAAAT ATTAAAAGAA CTTTTTCAAT CTGCTTTACT AGAAATGGAA TCTTGGAGTG	1260
CAGATAAAGA AATGGAGTTC ATCTATCGAA TTCTGGAACG ATATTCACAA CAAGAGGTCA	1320
TAGTAACCTT TGGGGAACGG ACTTTAGCTA AATTCAATTT GGAACAATTA GAGAAATTGA	1380
AATTCCTCTT TCCAAATTAT TTATTTAGTG AACCACTAT CTCAAATGAA TCAGGCTTAC	1440
TTATTTCAAT AGGTAAATT GATGATAACT ATTTGTATAA AACATTAATT GGATCGATTT	1500
CTAAGGAAGA AAGTTCAAGT ATCGCAAATC AAATTTTAT CAATTAAGGA TGAAATTGGT	1560
TAATCCTTCT TAGAAATTTG GAGTATTCCA ATAAATTAG AAAGGTATTT TATGGATACT	1620
AATCTTTTTT CAAAAATAA TACGACGATT TCGGTAAAAG AAAACGATTT TATTACAGAA	1680
GAAAAATTC AAAAAATTAT ACAATCCAA GATACGGAGA CATTGGCATT TATCTTAGAA	1740
TCAACTCCCT ATCATTTATC GATTGACATC TTAGAAGATC CTAGTCAGAC AGAGATTTCTG	1800
CTAATGACAA AATTAGTCAA TGATTATAGA TGGGCTATG CTGAAAGTCC GTCTGATATA	1860
ATTGTGACTT TATTTGCTTT ACGATATGTT TATCATAATA TCAAAGTTTT ATTAAAATCT	1920
AAGGCGGCAA TTAAGAAAGA TTTTCTAAA TTATTAATTC CAATAGGGAT TTTTGATATA	1980
GAAAGTTTAA AACATTTAGT TTCTTCCTTA CATTGAGATA CACTTCCTGA TTTTATGGTT	2040
CGTGAAGTAG AATCAATTTG GAATGAGTAT GAACTTTTA ATAATATTCG TGTAATTGAT	2100
GTCGGAGCTG ATCTAGCATA TTTTAAACAT CTGAACTTT TATCTAATGA GTTAGATGAG	2160
GTAATGTCTC AGGTTATTGT CGAAATGATT GACTTTTATA ATATTATTAC TGTAAAACGT	2220
GGTTTATCTC AAAATAAGAG TCATGGGGAT ATTTTACAAT TACTTTTCAGA TGAAGGAAGT	2280
ATTTCTGCTA AAGAATTAT ATACATTGTA GAAATCAAG AAATATTTGT GTGGTTCAAT	2340
AAAAATAATC CAAGCTTAGA TTCAATCTTT TCAACTTATG AATTGAAGAT GCAGGACGCA	2400

ACAATTTTCAT	CTTCTGAGTT	AGAATTTTTA	TGTGATTAC	TATTGTATAA	AACTTTAGAT	2460
CAAGGAAGGT	ACAATGTAGA	GGGGCCGTTA	GTTCTTGCTA	GATATTTATT	GGGATCTGAG	2520
TTTGAAGTAA	AGAATCTCAG	AATGATCATA	TCAGCTCTTC	AAAATACAAT	TCCCTTTGAA	2580
TCAATAAAAG	AAAGGATACG	CCCACATTAT	GGAAGCTAAT	AAGTATAAAA	TGGGCATAAT	2640
TGGTAGCCGT	GATATTATTT	TACCATTTAG	CATGATTGGG	TTTGATATAT	TTCTGTCCTA	2700
CCAAGAACAA	GAAGCTATAA	ATACACTAAG	AAAATTAGCT	CAATCTGATT	ATGGTGTTCAT	2760
TTATATCACT	GAAGACATTG	CTTCAATGAT	ATTAGATACA	ATTCGCCATT	ATGATTCCCA	2820
AGTTGTGCC	GCTATTATTT	TATTACCGAC	TCATAAACAA	GGTTTAAATT	TAGGATTAAA	2880
ACGTATAGAG	GATAATGTAG	AGAAAGCAGT	AGGACACAAT	ATTTTATAAT	AATGTACAAA	2940
ATTGTCTCTA	ATATTATCT	ATAATTTT	GACTTAGTAA	GGAGAATAAC	TTTGACTCAA	3000
GGGAAGATTA	TAAAAGTATC	GGGACCTCTA	GTTATTGCAT	CAGGTATGCA	GGAGGCTAAT	3060
ATTCAAGATA	TTTGCCGTGT	AGGTAAGCTA	GGTTAATCG	GTGAAATTAT	TGAAATGAGA	3120
AGAGATCAGG	CATCTATCCA	AGTCTATGAA	GAAACATCTG	GTCTTGGTCC	GGGAGAACCT	3180
GTTGTTACAA	CTGGAGAACC	TCTCTCGGTT	GAATTAGGGC	CAGGATTGAT	TTCTCAAATG	3240
TTTGATGGCA	TACAACGCCC	ATTAGATCGA	TTTAAATTGG	CTACTCATAA	TGATTTTCTA	3300
GTTCGTGGGG	TAGAAGTTCC	AAGTTTGAT	AGAGATATTA	AGTGGCATTT	TGATTCCACT	3360
ATAGCAATTG	GTCAAAAAGT	GAGTACGGGT	GATATTCTTG	GAAGTGTCAA	GGAAACCGAG	3420
GTAGTTAATC	ATAAAATTAT	GGTTCCTTAT	GGAGTATCTG	GAGAAGTCGT	TTCTATTGCA	3480
TCIGGCGATT	TTACAATTGA	TGAAGTTGTA	TATGAAATAA	AAAAATTGGA	CGGTAGTTTC	3540
TATAAAGGAA	CGCTTATGCA	AAAATGGCCT	GTCCGCAAGG	CGCGTCCTGT	TTCTAAACGT	3600
TTAATTCCAG	AAGAACCATT	AATCACAGGT	CAACGAGTTA	TTGATGCATT	CTTTCAGTA	3660
ACCAAAGGGG	GAGCTGCAGC	AGTTCCTGGA	CCGTTTGAG	CAGGAAACAC	AGTTGTACAA	3720
CACCAAGTAG	CTAAATTTGC	CAATGTTGAT	ATTGTTATTT	ATGTCGGTTG	TGGAGAACGT	3780
GGAAATGAAA	TGACGGATGT	ACTGAATGAG	TTTCCTGAGT	TGATTGACCC	TAATACCGGA	3840
CAATCAATTA	TGCAACGGAC	AGTTCTGATT	GCTAATACTT	CAAATATGCC	TGTTGCTGCT	3900
CGTGAGGCTT	CAATTTATAC	AGGAATTACC	ATGGCTGAGT	ATTTTCGTGA	TATGGGCTAC	3960
TCGTGCGCCA	TTATGGCTGA	TTCAACTTCA	CGTTGGGCAG	AAGCGCTACG	TGAAATGTCA	4020
GGACGTCTAG	AAGAAATGCC	TGGTGATGAG	GGTTATCCTG	CTTATCTGGG	AAGTCGTATC	4080
GCTGAATATT	ATGAAAGAGC	AGGACGTTCT	CAGGTTCTAG	GGCTTCCAGA	ACGTGAAGGA	4140

924

ACGATTACTG	CTATTGGAGC	TGTATCGCCA	CCTGGTGGAG	ATATTTCAGA	ACCAGTTACT	4200
CAAAACACTT	TACGGATTGT	GAAAGTTTTT	TGGGGGCTTG	ATGCTCCGTT	GGCACAGCGA	4260
CGTCATTTTC	CTGCAATTAA	CTGGCTTACA	TCTTATTAC	TATATAAAGA	CAGTGTGGGC	4320
ACTTATATAG	ATGGTAAAGA	GAAGACAGAT	TGGAATAGTA	AAATAACTCG	TGCGATGAAC	4380
TACTTACAAC	GGGAATCTAG	TTTAGAGGAA	ATTGTTCTGC	TTGTTGGAAT	TGATTCTCTG	4440
TCTGATAATG	AACGACTAAC	GATGGAAATT	GCTAAACAAA	TTCGAGAAGA	TTATTTGCAA	4500
CAGAACGCTT	TTGATTTCGGT	AGATACATTC	ACTTCGTTTG	CAAAACAAGA	AGCAATGCTA	4560
AGTAATATTC	TCACTTTTCG	TGATCAGGCA	AATCATGCTT	TAGAGTTGGG	TTCTTACTTT	4620
ACAGAGATTA	TGGAAGGTAC	CGTGGCAGTT	CGAGACCGTA	TGGCGAGAAG	TAAATATGTT	4680
TCAGAAGATA	GATTAGATGA	AATCAAAATT	ATATCAAATG	AGATTACACA	TCAAATTCAT	4740
TTGATATTAG	AAACAGGAGG	TCTATAAATG	AGTGTTATAA	AAGAATACAG	AACTGCTAGT	4800
GAAGTTGTTG	GGCCTCTTAT	GATTGTTGAA	CAAGTAAATA	ATGTGTCTTA	CAATGAGTTA	4860
GTTGAAATTC	AACTTCATAA	TGGAGAAATT	CGTCGTGGAC	AAGTTTTAGA	GATCCACGAA	4920
GATAAAGCAA	TGGTTCAGCT	TTTTGAAGGA	TCTAGTGGA	TAAATTTAGA	AAAGTCTAAA	4980
ATTCCTTTTC	CTGGTCATGC	ATTAGAATTG	GCTGTATCTG	AGGATATGGT	TGGTCGTATT	5040
TTTAATGGGA	TGGGAAAACC	AATTGATGGT	GGACCAGATT	TAATTCCAGA	GAAATATTTA	5100
GATATTGATG	GTCAAGCTAT	TAATCCTGTA	TCTAGAGATT	ATCCAGATGA	ATTTATTCAG	5160
ACAGGGATCT	CCTCTATTGA	TCATTTGAAT	ACTCTGTAC	GTGGTCAAAA	ATTACCAGTA	5220
TTTTTCAGGT	CGGGCTTACC	TCATAATGAA	TTAGCTGCTC	AGATAGCAAG	ACAAGCGACT	5280
GTTTTAAATT	CTGATGAAAA	TTTTGCGGTT	GTATTTGCAG	CAATGGGTAT	TACTTTTGAA	5340
GAAGCTGAGT	TTTTTATGGA	AGAACTCAGA	AAAACAGGAG	CGATCGATCG	TTCCGGTTTTA	5400
TTTATGAACT	TGGCAAATGA	TCCTGCAATT	GAGCGTATTG	CAACTCCCCG	CATTGCTTTA	5460
ACTGCGGCAG	AGTATCTAGC	TTTGTAAAAA	GATATGCACG	TTCTAGTTAT	CATGACGGAT	5520
ATGACTAACT	ATGTGAAGC	GTACGTGAA	GTCTCGGCAG	CTCGCCGTGA	AGTTCAGGG	5580
AGACGAGGCT	ATCCGGGATA	TTTATATACA	AATTTATCAA	CTCTATACGA	AAGGGCTGCT	5640
CGCTTAGTTG	GTAAAAAAGG	TTCCGTGACA	CAGATTCCTA	TTTTAACAAT	GCCAGAAGAT	5700
GACATAACAC	ATCCAATTCC	TGATTTAACT	GGATACATTA	CTGAAGGGCA	AATTATTTTG	5760
TCGCATGAGT	TGTATAATCA	AGGTTATCGT	CCACCAATCA	ATGTTTACC	TTCTCTCTCT	5820
CGATTAAAAAG	ATAAGGGATC	TGGAGAAGGT	AAAACCTCGT	GAGATCATGC	TCCAACATATG	5880
AATCAACTGT	TTGCAGCCTA	TGCCCCAAGG	AAAAAGGTTG	AAGAGTTAGC	AGTAGTATTA	5940

925

GGAGAATCGG	CTTTATCTGA	TGTAGATAAA	TTGTATGTGA	GGTTTACAAA	GCCTTTTGAA	6000
GAAGAGTACA	TAAACCAAGG	ATTTTATAAA	AATCGAAATA	TAGAAGATAC	GTTGAATCTT	6060
GGGTGGGAAT	TACTATCAAT	TCTTCCTAGA	ACAGAGTTAA	AACGTATCAA	AGATGATTTG	6120
CTTGATAAAT	ACTTACCTTT	GGTAGAAGTT	TAATCCCGAA	ATGGAGTGAT	TATCTATGGT	6180
ACGTTTGAAT	GTAAAACCAA	CTCGTATGGA	ATTGAATAAC	TTAAAGGAAC	GTTTGACAAC	6240
AGCTGAACGT	GGACATAAGT	TATTAAAGGA	TAAAAGAGAT	GAATTGATGA	GGCGATTTAT	6300
TTCTTTGATT	CGTGAGAATA	ATCAACTTCG	GAAAGAAGTG	GAAAGTTATC	TAATTGATAA	6360
TCTAAAATCC	TTTGCAGTTG	CTAAATCATT	AAAGAATTCT	CAAATGGTGG	AGGAATTATT	6420
TTCAATTCCA	TCGAAAGAAA	TTGAATTATT	TCTTGAGAAA	GAAAATATCA	TGAGTGTAAC	6480
AGTTCCTAGA	ATGCATATGA	ATATTACTTC	TCAAATGAG	AACAGTGAAT	ACAGCTATTT	6540
ATCTTCTAAT	AGTGAAATGG	ATGATGTATT	TGCTACAATG	AATAGTTTAA	TTTATAAATT	6600
ACTAAGACTG	GCAGAAGTTG	AAAAAACGTG	TCAGTTAATG	GCTGATGAAA	TAGAAAAAC	6660
ACGTAGACGT	GTAAATGGTT	TAGAATACTC	GATTATTCCA	AACTTGTCGG	AAACTATTCA	6720
TTATATAGAA	TTGAAACTAG	AGGAGGCAGA	AAGAGCCAAT	TTAGTTCGTA	TTATGAAAGT	6780
GAAGTAGATC	CTTTATTTAG	ATTATTAATT	AGATGAACAA	ATATCAGCTT	GGATAAGGCT	6840
TTAAGCCTTT	CTAAGCTTTT	TTTATTGACA	GTATCAGGAT	ATCTTTTTCA	AAATTTTGGT	6900
TTGTTAGATA	ATGAAAATGT	TTCTACTAAT	CTAGATTIAG	GATTAGTAAA	TCGTAAATGT	6960
AATTATATAG	AAAGTAAGCG	CGTCATAACA	AGGTATCTAT	CATTTCATGGA	GCTCCTCCTG	7020
TATACTATTA	GTAAGTAAA	ACTATTGGAG	GATATTTTAA	TGCCACAACC	TATTGTTCTT	7080
GTAGAGATTC	CACAATCTCG	TCGTTTGTAT	TCTAAAAAGA	GAAATGATAT	TCTGCTTAAA	7140
ATTCGTATTG	GCAAGCTTGA	AGTAAGTTTT	TTTCAATCTC	TCAATCTCGA	AATGGTAGAA	7200
CAGCTTTTGG	ATAAGGTGTT	GCTCTATGAC	AATTCACTTA	TCTAGCCTAG	GGGAGGTCTA	7260
TCTCGTGTGT	GGGAAAAC TG	ATATGAGACA	AGGAATCGAT	TCACTGGCTT	ATCTGGTTAA	7320
AACCCACTTT	GAATTGGATC	CTTCTCCCG	TCAAGTCTTT	CTCTTTTGTG	GTGGACGTAA	7380
AGACCGCTTT	AAAGTCCTTT	ACTGGGATGG	TCAAGGATTT	TGGCTACTAT	ATAAACGCTT	7440
TGAGAACGGC	AGATTGATTT	GGCTAAGTAC	AGAAAAGGAT	GTCAAAGCTC	TCACACCAGA	7500
ACAAGTAGAC	TGGCTTATGA	AGGGCTTTTC	TATCACTCCA	AAAATATAGT	AGATTGAAAC	7560
TAGAATAGTA	CACCTCTGCT	TCTAAAACAT	TGTTAGAAAT	CGATTTTACT	GTCCTGATCG	7620
ATTTGTCCTG	TTCTTATTTC	ATTTTACTAT	AAATCCATCA	GAAAGTCGTG	ATTTCTATTG	7680

926

AAATGAGGAC TTTCTTTTTA TACTCATCTG CTTTCAAAAA GCATTCTAGT CCATCTCCGA	7740
TTAACGATGG ACTTTATCAC CTCCTTCTCC AGTCCTTGTA TAACATCTTG GAGTTGATTC	7800
ATGACATCTT CCAAAGTTTA AAAGGCTTTA TTCTTAAATC CACGTTTACG AATCTCTTTC	7860
CACACTTGTT CAATGGGGTT CATCTCTGGT GTGTATGGAG GAATAAATGC AAAGCCAATA	7920
TTAGTCGGAA TCTTTAAGGT ACTTGATTTA TGCCATATAG CATTGTCCAT AACGAGTAAA	7980
AGATAATCAT CTGGATAAGC TTGTGAAATC TCCTATTCCT AAAGCCCCCT TAGCGCATAA	8040
CTTTGGCTCA GCTTCTATTA TCGCTCACAC CATCCATCAG AAGTTTAATC TGAAGGTACC	8100
CAATTATCGC CAAGAAGAAG ATTGGGCTAG GATGGGTTTA CCAATCACAC GTAAGGAAAT	8160
CTCTAATTGG CATATCAAGG CGAGTCAATA CTATTTGGAG CCCCTTTATA ACCTCTTGCG	8220
AGAGAGACTA TTGACTCAGC CCTTACTTCA TGCGGATGAA ACTTCTTATA GGGTGCTAGA	8280
GAGTGATAGT CAGCTGACTT ACTATTGAC TTTTTGTCA GGTAAAGCAG AGAAACAAGG	8340
GATTACGCTT TACCACCATG ATCAGTGTG AAGTGGTTCA GTACTACAAG AATTCCTAGG	8400
AGATTATTCT GGCTATGTGC ATTGTGATAT TTGCGGCAG TAACTTAGGA CTTTAGTCCT	8460
CTAGTTCTGC CTATGCGATA GCAGTCCAAG GTTTAGGAGC AAGCGACGC TAAGCTTGGT	8520
AAACTTCGAA CCGCTCGTCT GCTTATCGTC AACTGGAAGA AGCTGAACTT GTTGATGTT	8580
GGGCGCATGT GAGAAGGAAG TTTTTGAAG CGCCCCCCA AGCAAGCGGA TAAATCATCC	8640
TTAGGAGCTA AAGGTTTAGC TTATTGTGAT CAGTTATTTT CCTTGAAAG AGACTGGGAG	8700
GCTTTGCCAG CTGATGAACG ACTACAGAAA CGTCAAGAAC ATCTCCAGCC CTTAATGGAA	8760
GACTTCTTTG CTTAGTGCCG GCGTCAGTCA GTTTTAGCAG GTTCAAAACT AGGAAGGGCA	8820
ATTGAATACA GCCTCAAGTA TGAAGAAACC TTAAAGACCA TTTTGAAAGA CGGACATCTG	8880
GTCCTTTCCA ATAATCTAGC TGAACGCGCC ATTAAATCAT TGGTTATGGG ACGGAGTAAA	8940
AGAGTCCAGT GGACTCTTTT AGCCTAAGCT CAGTTTAAAA AAGCGAGGGT GGTATTTTTC	9000
TCAAAGTTTT GAAGGAGCTA AAGCAAGAGC TATTATTATG AGTTTGTGG AAACAGCTAA	9060
ACGTCATCAA TTAAATAGCG AGAAATATCT ATCCTATCTT CTAGAATGTC TTCCAAACGA	9120
GGAAACTCTC GTAAACAAAG AGGTTTLAGA GGCTTATTTA CCATGGACTA AAGTTGTACA	9180
AGAAAAGTGC AAATAAGAAA TCTCCAGATT AGGAATATC CGTGAGTTCT CCAGTCTGGA	9240
GATTTTTCAT TAGACTTCCT GCGAAACAAA ATATGGTATA ATAGTTCTAT GAATGATGAA	9300
GCAAGTAAAC AACTAACCGA TGCACGATT AAGCGTCTG TTGGTGTTC ACGCACGACT	9360
TTTGAAGAGA TGTTAGCTGT ATTAAAAACA GCTTATCAAC TTAAACACGC AAAAGGTGGA	9420
CGAAAACCTA AATTAAGTCT AGAAGACCTT CTTATGGCCA CTCTTCAATA TGTGCGAGAA	9480

927

TATCGAACTT ATGAACAAAT TCGCGCTGTT TTTGGTATTC ACGAAAGCAA CTTAATCCGT	9540
CGGAGCCAAT GGGTTGAAGT AACTCTTGTT CAAAGTGGTG TTACGATTTC AAGAACTCCT	9600
CTCAGTTCTG AGGACACGGT AATGATTGAT GCGACGGAAG TAAAAATCAA TCGCCCTAAA	9660
AAAAGAATTA GCGAATTATT CTGGTAAAAA GAAATTTTAC GCTATGAAGG CTCAAGCGAT	9720
TGTCACAAGT CAAGGGAGAA TTGTTTCTTT GGATATCACT GTGAACATT GTCATGATAT	9780
GAAGTTGTTC AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG	9840
TGGTTATCAA GGGCTCATGA AGATATATCC TCAAGCACAA ACTTCACGTA AATCCAGCAA	9900
ACTCAAACCG CTAACAATTG AAGATAAAGT CTATAACCAT GCGCTATCTA AGGAGAGAAG	9960
CAAGGTTGAG AACATCTTTG CCAAAGTAAA AACGTTTAAA ATGATTTCAA CAACCTATCG	10020
AAATCATCTA AACGTTTCGG ATTACGAATG AATTTGATTG CTGGTATTAT CAATCATGAA	10080
CTAGGATTCT ACTTTTGCAG GAAGTCTATT ATCAAAAATA CCATCAAGAT TATATAAGAT	10140
TGATACAGGA AAAGTTTAT TTGATGGTGT AAATATTAAT CAAATAGATA AAAAAATATT	10200
AAGTCAAAAT TTAGGAGTAG TTCCACAGGA TTCATTTTTA TTGAACCGAA GTATTCTTGA	10260
TAATATAACT TTAAAGCACG AAGTTACTTC ACAAAGATA GAGGAAGTTT GTAAAGCAGT	10320
TCAAATCTAT GATGAAATCA TGGCTATGCC GATGAAATTT AATACTATCA TCTCAGAGAT	10380
GGGGTCAAAAT ATTTCAGGTG GGCAAAGGCA ACGGATAGCA CTGGCACGTG CATTAAATAA	10440
TAATCCTAGT ATTGTAATTT TAGATGAAGC AACTAGTGCA TTAGACACTA TTAATGAGGA	10500
AAGAATAACA AAGTATATAC AAAGTCAGGG CTGTACTCAA ATAATTGTAG CTCATAGATT	10560
GTCAACGATT AAGGATGCGG ATGTTATTTT TGTAATGAAA GGTGGTAAGA TTGTTGAGTC	10620
AGGAAATCAT AAGTACTTAA TGGATCTTGG TGGAGAGTAC TACAGCTTAT ATACAAAAAG	10680
GAAATGAGGT GTAAAGAAAA TGAAGAAAGA AAATGAATAT GTAATTTTAA CAACAGCCTC	10740
ACTAGGGGTG ATGATTGGAA TAGTGTTCG AATTTTTTTA GATTTTCCAG TTGAATATGG	10800
TATTTCTTTA GGCTTGTTGA ATGGAATAGT ATGGGTTCG CTGATTCTTT AAAAAACAA	10860
TAAGAATTAA GCATAATTTT TTGCTGTAAA CTAAGGAGTA GAGATGGCTA TAGTTGAAAT	10920
TATAAATCTA AAAAAAGCT TTAAAGATAT TGAAGTTATT CATAACACTT AAATAATAGA	10980
GCAACTACAG TAGTACCTTA AAAACATGAT TAAATCGCTA TTCTTAGGAG TAGCGGTTTT	11040
TCTTTTGTG TAATACTCTT TGAAAATCTC TTCAAACAC GTCAGCTTTG CTTTACCGTA	11100
CTCAAGTACA GCCTGCGGCT CGCTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATAAAA	11160
AGGGTCAAGT AAGTATAGTA AATTGAAATA AGATATGAAC AAATCGATTA GAAAAGTCAA	11220

928

ATTAATTTCT AGAAATATGT TAGAAATG	TTTGAATTCC GCAATCAATT TGTTCAGTTT	11280
TTATTTTCATT TCATTTTATT TAATTAGATT	TTCCAATTTT TTAAATTCAG CTAAAAATCC	11340
CCAATCGTAG TGATTGAGGA TTGAGTAAAT	AAATCTTAAA CAATACCTTG TGCAATCATG	11400
GCATTTGCTA CATTTTCAA GGCAGCAATG	TTAGCTCCTG CAAGGTAGTC TTTATCAAGA	11460
CCGTATGTTT CTGAAGTCGT TTTAGCTGTG	TTGAAGATGT TTGTCATGAT GTCTTTGAGA	11520
CGGCCATCAA CTTCCTCACG AGTCCATGAG	AGGCGAAGAC TGTTTTGGCT CATTTCAAGA	11580
GCTGAAACGG CTACACCACC AGCGTTGGCA	GCTTTTGCAG GTCCGTAGAA GATACCATT	11640
TCTTTGTAAA CTTTGATGGC ATCAAGGTCG	CTCGGCATGT TGGCACCTTC AGATACACAG	11700
ATAACGCCIT GAGCAACCAA ACGTTTAGCT	GCTTCACCGT TGATTTTCGT TTGAGTGGCA	11760
CATGGAAGAG CAATGTCATA GTTCCAGCG	TAAGTCCATA CAGTACCTTC GTGGTAGGTT	11820
GCAGTTGCTT TTTAGCTGC ATACTCAGTC	AAACGAGCAC GACGTTTTTC TTTAACATCA	11880
ACCAAAAGAT CGAAGTCGAT ACCATTTTCA	TCGATGACAT AACCATTTGA GTCAGAAACA	11940
GAAATAACAG TTGCACCGAG TTCAGTTGCT	TTTGAAGAG CATATTGAGC AACGTTACCA	12000
GAACCTGAAA TAACGACTTT CTIACCAGCA	AAGCTGTTAC CGTTAGCTTT GAGCATTTCT	12060
TCAGTATAGT AAACCAAACC GTAACCAGTT	GCTTCTGGAC GAATCAAGCT ACCACCAAA	12120
CCAAGAGGTT TACCAGTCAA GACACCAGCA	TCAAATGGT TAAGACGTTT GTATTGACCG	12180
TAAAGGTAAC CAATTCACG TCCACCAACA	CCGATATCAC CAGCAGGTAC GTCAAGTGAT	12240
GGTCCGATGT GTTTTTGCAA TTCAGTCATG	AAGCTTTGGC AGAAGCGCAT CACTTCAGCA	12300
TCTGTTTAC CTTTAGGATC GAAGTCTGAT	CCACCTTTAC CTCCACCGAT AGGAAGTCCA	12360
GTCAAGACAT TTTTAAAGAT TTGTTCAAAT	CCGAGGAATT TCAAGATCCC TTGGTTTACA	12420
GTTGGGTGGA AACGAAGTCC ACCTTTGTAT	GGTCCAACAG CTGAGTTGAA TTGAACACGG	12480
TAACCACGGT TTAATTGAAT TTTTCCATCA	CGGTCAACCC AAGGAACACG GAAAGAAACC	12540
ACGCGCTCAG GCTCAGTAAT ACGTGCCAAG	ATATTTTCTT CGATATACTC AGGGTGTTTT	12600
TCAAATACAG GTTCTAAAGT GTTGAAAAAT	TCTTCAACAG CTTGGAGGAA TTCAGCCTCG	12660
TGCCGG		12666

(2) INFORMATION FOR SEQ ID NO: 138:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3083 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTAAATAGA GCCATTTTGA	60
CCAAAAATCC CGATAAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA	120
ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGGTCA AAAAGAGGGC CGTCGGATAA	180
CTGATAAGCA GTGCCACAAA GGTCACAATG CCTGCATAAA GCACTGAGTT GAAACTCATT	240
TTAAGATAGG TCAAGTTTIG TGACGCAAAG TAAGATTGT AATTTCTAA ACTGAACTGG	300
CCTTCGATGT TGAAAAGGA TTGACCGAAA ATCAAGACCA AGGGTGCCAA TACAAAGAGC	360
GCAATCCAAA GCATGTAGGG TACTACAAAG AGTTTAGAGC TTGTTTCTT CATCTCTTTC	420
CTCCTCGATT GCATGATCA AACCTGCTTC TTGCTCTTCG ATTTCTACGT ACTCCTCAAT	480
ACGAGCATCG AACTCTCTT CGGTTTCATT GAGACGCATG ATGTGGATGT CTTCTGGTTC	540
AAAGTCCAGA CCGATTTCCT CACCCACGAT AGCCTTACGG GTTGAGTGGA TCATCCATTC	600
ATTTCCAAGT TCGTCATAGG CGATAATTTC ATAATGAACT CCACGGAAAA GCTGGGTATC	660
GACCTTAACT TGGAGCTTGC CTCTTCAGG AAGGGTAATG CGCAAGTCCT CTGGACGAAT	720
AACGACCTCA ACAGGTTTCT TTGGCTTCAT CCCACCATCA ACCGCTTCAA AGCGTTTGCC	780
GTTAAATTCG ACCAAGTAGT CCTCAATCAT GGTACCTGGC AAGATGTTTG ACTCCCCGAT	840
AAAGGTGGCA ACAAAGTGGT TGATTGGCTC ATCGTAGATG TCCACAGGGG TTCCAGACTG	900
GACAATCTCG CCATCATTCA TAACGAAAAT CCAGTCACTC ATGGCAAGAG CTTCTTCCTG	960
ATCGTGAGTG ACAAAGACAA AGGTAATGCC CAATCGTTGT TGTAATTCAC GCAATTCGTA	1020
CTGCATGTCT GTTCTCAATT TCAAGTCCAG CGCTGATAAA GGCTCGTCCA ACAAGACCAC	1080
ACGGGGTTGG TTGATGATAG CACGGGCGAT GGCCACACGC TGACGTTGTC CTCCAGAAAG	1140
TTTGCGGATG GAACGTTTTT CATAACCTTC CAACTGAACC ATCTTGAGAA CTTCCGCTAC	1200
ACGCTGCTCG ATTTCTTTCT TATCAATTTT ACGCAAGCGA AGTGGAAGG CAACATTTTC	1260
AAACACATTC ATATGTGGGA ACAAGGCATA GGATTGGAAG ACGGTATGTA CGTCGCGCTT	1320
GTGGTTGGA ATATCATTGA TACGAACACC GTCTAGCATG ATATCTCCTG TCGTCGCATC	1380
CAGTAAACCT GCAATAATGT TTAGGATAGT TGATTTCCCC GAACCAGATG CACCTAGAAG	1440
GGTGTAGAAT TTCCCTTCTT CCAACTCAAA GTTGATGTCT TTGAGAACCT TGGTGTTGCT	1500
GTCTTCAAAA ACTTTAGAGA CGTTTTTGAA TTCGATAATT GGCTTTTCA ATTGGCATAA	1560
ATTCCCTCTT TTTCATAGAT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC	1620
AGGGAGTAAA ACCACCTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA	1680

930

CTTCTCTTTC AAGCGTAATA CCTGAGTGT	CTTTGACTTT TTCGATAACC GATTGGATCA	1740
AGTCCTCGTA GTCTTTGGCC GTTCCATCTG	CGACATTGAT CATAAATCCT GCATGCTTTT	1800
CTGACACTTC TACGCCACCG ATACGATAGC	CTTCAAGCC AGCTTCTGAA ATTAAGTAC	1860
CTGCAAAATG CCCGACTGGA CGCTTAAAGA	CCGAGCCACA AGATGGGTAT TCCAAAGGTT	1920
GCTTGAGTTC ACGTAGGTGC GTCAAGCGGT	CCATTTCCTG CTTGATAACC TGATGGGTTC	1980
CTGGAGCTAG GGCAAATTTA ACTGACAAGA	CAACTGCACC AGACTCCTGA ATAGCTGAAT	2040
GACGGTAACC AAAAGCCAAG TCTTTAGCAG	ACAGGGTTTC GATTTCCTCA TCCTTGGTCA	2100
AGACCTTACA AGACTGCAAG ATGTGAGCAA	TCTCGCCACC ATAGGCACCC GCATTCATAA	2160
AGACAGCACC GCCAACGCTT CCTGGAATAC	CACAAGCAAA CTCAAAGCCA GTTAAACTAT	2220
GACGGAGGGC AATGCGAGTT GTTCAATCA	AGTTAGCCCC AGCTTCTGCT TCAATGGTAT	2280
AGCCATCAAC AGAAACGTTA TTGAGCTTGT	CACACAAGAT GACAAATCCA CGAATCCAC	2340
CATCAGAAC GATGATATTG CTTGCATTGC	CAAGAACCAT CCAAGGGATA TTTTCTTGGT	2400
TGGCAAATTT CACAACGCGA GCCAACTCAA	AACGATTCG TGGAAAGACC AAATAATCAG	2460
CCTCTCCACC TACTTTTGTA TAACTATAGC	TATGCAAGGG TTCCTTAAAA CGGATATCAA	2520
TTCCTTCTAA GATTTCAGC ATTTTCTCTC	TTACAGACAT GTCACCTCTC CTTTACAAA	2580
ATTCAATCCA TTATACCATT TTTAGAGACA	TTTGACGACC ATAAAAATAC CTTGTTTGA	2640
TTTTTGCATAA GAAAAAGAGG TTCCCCCTT	TTTATGATTT TTTACAAAAG ATTTCTTGG	2700
TTCCATAGGC GACCAGAACG AGCTCCAGTG	CTAGAATCAC TTCAACCAAG ACTGGATTG	2760
TCAACCAGCC TACTTGAAA AGAGATGGTG	CCAGATCAAA GAAGGCATGC AAGCCATAGG	2820
CTGCTAGGAG ATAAATCCAT TTCTTCTGGC	GAACAGCTTG GTAAACCCAA ACTGTCAAAA	2880
GTAATTGGAA ACCAAGCGCC AAGATTCGCT	CAAAACCAAG CAAATAAATC TGCCAGACCG	2940
AAAGTGACTG AATGGTTTTT AACATATTTT	CAGACAGTAA TTGCAATACC TGTGGATTCT	3000
GAGTTTGAAC TGCCGAAAGA ACAATGTAAA	GATTGACTAA ACTAGTAAGC CCTAGAAAAA	3060
TCAACTCCAA GCCACCATGC CCC		3083

(2) INFORMATION FOR SEQ ID NO: 139:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 15363 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

931

CCGGAGGATA TTGACCACCA CCAAAGCAG GGGGAAAATC GAAATCAACC AATAGTAGGC	60
TACTGCGACA CTGGTCAACT CACTATCTGA TGCTTCATAA TAATGCAAAA AAGCTTTTAA	120
TAAAGGTTTG TCTATCAGCT CTTTCCACCA CTTTTTCATG TCATACTCCT TCACTTATAA	180
TCTTATACTC AATGAAAATC AAAGAGCAAA CTAGAAAGCT AGCCGCAAGC TGCTCAAAAC	240
ACTGTTTTGA GGTGTAGAT AAGACTGACG AAGTCGATCA CATACATACG GTAAGGCGAC	300
GCTGACGTGG TTTGAAGAGA TTTTCGAAGA GTATTAACTA ATTTCTTCTT ACCAATTCCA	360
CCATATCATA CCGTAGGGTA TTGGCAGCTT CCTTCAAGGA ATAGTTCTCT AAGTTATTTA	420
CATTTTGTCG TAATTTCTTG GCATACTTAG TCGTAATCAA TCGTTTTTCT TCGTATTCGA	480
AAATCAACTT GCGCTCCAGA TAATAGCCTC TCAGCATTTC ATCGATATTG TTGGGTTTGA	540
CACGATTGAT AACCCGTCG ACAAGGCAC CACTGCTGAT AATAGCTGTT TCTCGAAGAC	600
GAGACTCCTG CATAAACTA ATCAAAGAGC GTCTGTAGAC TCCCTTCAGG TTTTCCAAAC	660
TTTCAATAAT CATCTCTGTA TTGGCAAGAT AGAGCTCTGC AATTGTGTCA TAATCAAGAG	720
CACGGAGACG GCTTTGCTCC TTGTTCTTCC AGCTACGAA GGTCTTCCG AGAGTAAAAA	780
CTTCATGAAG GAGAAAACGT AAAATCCTCA AGGAAACAAG AAAATAATAG GTCAGTCTTG	840
AGGCAAGTTT ACGATTGATT CCTTGTCTA TATTTTTCAG ATAACGTTGG TAAACTCGGT	900
AAGCACGATT GCTAATGTTT CCTCTTCAT AGGCCTGTTT CAAACCATCA CTTTCAATAC	960
TAAGAATCAA GAGTTTCAA GCAGCCAGT CTCTTGATC ATCCTGGTTT TCTTGCTTA	1020
AAATGAGATT TTCAATACGT CCATGATAAT TGTCATAGC CGCATAGAGG GGAAGTTTAT	1080
TTCTGGTCTC TTCCAACCT TTTTCCAAC CTAGCGTTAC TTCATTCAA ATGGCGATAT	1140
GCATAAGATA ATCCTTGCTT TCTTCTCTT CATCAGAAAG ATGAGGCAAG ACCAAGAGAC	1200
CTGTAAAAA GCTAACCAAG GTCACACCTG CAACAAGGAA AAGCAAAAGA GGATACTCCT	1260
GTTCTAGATT ACTTGGTATC AAGAGAATCG TAGCAATCGA CACCGTTCCC TTAACACCTG	1320
AAAAGGTCAA GAGAAACATG TCCTTCATAT ACTTATTTAG CTTTTTCTTG AGGCGTCGGG	1380
TTCTATAGGC ATAATAGCCA TAGATCATAA TAAACGAAT GACAAAAAGG ACAAAGGTAA	1440
GGGCGATAAG AGATAGCAAT AAAAGTAGAG GATTATAGAT TGGATTGGTC AAGATAGGTT	1500
CTGCTATCAT TTCCAACCTC ATCCCTAAAA TCACAAAGAC AGAACCGTTG AGCATAAAGG	1560
TCACTGTATG CCAGACCGTC TCGGTCACCG TATCCACTTG GGCTTCGAGG AGCGTGATTT	1620
TCTTGAAGCG ACTTGCCCTT AAAATTCCAG CAACTACGAC GGCAATAATA CCTGAAACAT	1680
GAACTTCTTC TGCCAGAAAG AAGGTCAC TAAGGCAAACT CAATTCTAAT AAAAGTTCAC	1740

932				
TGGCAATATC	CGTTGCGCGC	ACACTTAGCA	AGAAGGTATG	GAGGAAGCGG TTGGTCATGG 1800
CTGTTAAAAA	TCCAATTAAA	AAACCGCCTA	GGATTGAAAA	GATGAGCGAA CTGCTAGCTT 1860
GCCCCAGAGA	AAAAGCTCCA	GTGTGCCAAG	CTGTCAAAGC	TACCTGAAAA GCCACCAAAC 1920
CAGAAGCATC	ATTCAAGAGT	CCTTCGCCCT	TAAGAATATT	GGACACGCGC TTAGGAAAGC 1980
TAAACGCTC	CGAAAGAGAG	GCAAAGGCCA	CCAAGTCCGT	AGGACCAAGG GCTGCCCCAA 2040
CAGCCAAGCA	AGCTGCCAAG	GGAAGGCTGA	ACCAAAGAAG	ATGGGCCAAG CCACCCAAAC 2100
TCAGGGTCGA	GATAAAAAATC	ACTGGAAATA	TGAGATAAAC	AATGATTCCG CAGTGTTTTA 2160
AAATAGCCGT	AACATCTGCT	TCTTCAGCCT	CTCGGAAAAG	CAAGGGTCCG ATAACCAGTG 2220
CCAAAAACAA	CTCCGTATT	AGGTGAAAGT	CAGTATTGGG	TAAAAAGAGA CCAATCACAA 2280
TTCCCAAAAG	AATTTGCACC	AAAGGGAGAG	GCAAAAAGGG	CAGGAGCTTA TTGGTTGTAC 2340
TTGAGACAAT	CAAAACCAAGT	AAAAATAGGA	TGAGGTAAAT	CAGTAATTCC ACGCACGTCC 2400
TCCTTAATCT	TTTTTACAAC	AGGATTCAAA	TATCTCCTTC	TGCTCTTTGA TTTTTTGGTC 2460
AATCTTGAA	CAGTCTTTGT	GCTCAATTTT	TCTCTGGCAC	CGTTCCATTT CAAGAGCAAC 2520
TAATTTTTC	TTGATTTTAA	GCATTTTTTT	GCTCATATGC	GCTTGGTCTA GCACGCCCAT 2580
CGCTCGTTCG	TGGTGGGTG	ATTCAACAAA	ATTCTGGCGC	ATGGCATCCA GCTTTTCGTG 2640
TAAGTATTGT	TTATCCATGT	CTGTATCTCT	CTAATTTTTC	AATCATCACT AAAAACGGCG 2700
GGTGTGTGAC	TTGGTTTAAA	GTTCGGTAAA	TGGCAGCTGT	GTACTCTTGT TGGTTCAACT 2760
GGATCACAAA	ATCCAAGACA	GCATCTCTCT	CGAGATCGCC	TCCTTCATGA CCATAGTAAA 2820
TCATAATAGC	AATTCGTCCA	CCTTTGACAA	GTAAGCCACA	TAGCTTTTCT AATGCCTCAA 2880
TCGTGTCTG	CGGTGGGTG	ATGACAGACT	TATCAGCTGC	CGGCAATAG CCCAGATTAA 2940
AAATCCCTGC	CTTAGCTTTT	ATCACAAACT	GGTCCAGTGT	CTCATGGCCT TGCAAGATTA 3000
ACTGGGCATT	TGTCAGTCA	GCCTGATGCA	AACGCTCTTG	GGTCTTTTCC AAGGCTTGCT 3060
TCTGAATATC	AAAGGCATAG	ACTTGCTTGG	CTAGCTTGGC	TAAAAAAAGC GTGTCATGAC 3120
CATTTCCCAT	AGTCGCATCC	ACTACGACAT	CCTCTTTTGT	CACGACCTCA GCCAAAAAAT 3180
CATGTGCCAT	CTCAAGTGGT	CTTTTCATTT	TCAAACCTCT	GTTTTACAGC CTTGCATCCT 3240
TGAACACTTC	CACGACGTCG	CATCTCCATC	TCAATGCTGT	TGAGGACTTC CCAATTATTG 3300
AGGCTCCACA	TAGGACCAAG	CAGCATATCC	CTAGGCGCAT	CTCCTGTAAT TCGATGGATG 3360
ACGATATGTT	TGGGAATAAT	TTCCAGTTGG	TCACAGATGA	CCCTGACATA TTCGTCTGA 3420
CTCATCAATT	GTAAACGCCC	CTCATGGTAA	TCTCGTTGCA	TACGAGTATT TGTATAAGA 3480
TGGAGCAAA	GCAGTTAAT	CCCTTGAATA	TCGTTATCCG	TGACACAACG GCGGACATTT 3540

TCAACCATCA	TCTCATGGGT	TTCACCAGGC	AAACCATTGA	TCAAATGGGA	AACAATCTCA	3600
ATTTTTGGAT	ACTTCTCTCA	ACGCTTGACC	GTTTCCACCT	ACAATTCATA	AGAATGCGCA	3660
CGGTTAATCA	GGTCAGAGGT	TGCTTCATAA	GTAGTTTGCA	AGCCCAATTC	AACCGTCACA	3720
TGCATGCACT	CCGATAACTC	AGCCAAATAT	TCGATGGTTT	CGTCTGGTAA	ACAGTCTGGG	3780
CGCGTCCAA	TATTGATTCC	TACCACACCT	GGCTCATTGA	TAGCCTGTTC	ATAACGCTCT	3840
CGAATAACTT	CCACCTTTTC	ATGGGTGTTG	GTAAAATTTT	GAAAAATAAC	CAGATACTTC	3900
CGAACATCCG	GCCACTTGCG	GTGCATAAAG	TCAATTTCCT	TATAAAATTG	CTCACGGATA	3960
GGCGCATCCG	GTGCCACAAT	GGCATCTCCA	GAACCAGAAA	CCGTACAAAA	AGTACAGCCC	4020
CCATGAGCCA	CAGTCCCATC	ACGATTGGGA	CAATCAAATC	CCGCATCAAT	AGGGACTTTA	4080
AAAGTCTTTT	CTCCAAAGAG	TTTTCGATAA	TAATCATTCA	AGGTATTATA	AGATTTCATG	4140
ACTTTCATTA	TAACAAAAAT	CACCCACAAT	CTCAAAGGCC	TGACTTTCCT	ATAAATTCCT	4200
CTGTTTCTCG	TTTCCATTAG	CCTTTTTTTA	TGATACAATA	TGGGTATGAT	TTAATGAAA	4260
TTAGCATCTA	TTTATTATT	GATACTGACC	TTAGTCGTCT	GCATTATCCT	AACCAAACCT	4320
TTTAGATTAA	AAAAACTAGG	ACGAAACTTT	GCGGATTTGG	CTTTTCCAGT	CTTGGTATTT	4380
GAGTATTACT	TGATTACAGC	TAAACCTTTT	ACCCATAATT	TCCTCCCTAG	ACTGGGGCTA	4440
GCCCTCTCGA	TCCTAGCCAT	TATTCTCGTC	TTTTTCTTCC	TTTTGAAAAA	ACGCAGCTTT	4500
TACTACCCTA	AATTTATCAA	ATTCTTCTGG	CGTGCAGGAT	TCTTATTAAAC	CCTTATCATG	4560
TATATAGAAA	TGATTGTTGA	ATTGTTCTTA	ATGAAATAGT	CGAATCCCTA	AGCATTTTCT	4620
AGGGATTTTT	GCTTCTCTA	CAAAATAGTA	TAGACAATAA	CACATATACAA	TTTTATACAA	4680
AGAAAAGAGT	CTGGGACAAT	AGTCTCTTAT	ATCCAAAAAG	GCAACGGATT	TGCCGTTGCT	4740
TTTTTGGATG	GTTACGATAG	TCTTGGTAAA	ATAGAATTGC	CCAATAAACC	ATTTAGAAAG	4800
GCTATCCCAT	GCATATTAC	TATAACACAA	ATCAAACAAC	TTTACCACTA	GAAATCAGTT	4860
CCTTCTTACC	ACAAGATCAT	CTCGTTTTTA	CTATTGAAAA	AGTGGTGAAT	ACCTTGGAGG	4920
AACGTCACTT	CTACACCTCC	TATCATGCCT	TTGATCGCCC	GTCTTATCAC	CCTAAAAATGC	4980
TTGTATCTAC	TCTTCTATTT	GCCTATTAC	AAGGGATTTT	CTCTGGTCGA	AAAATTGAAA	5040
AATGGAAGAG	TTAGTGACCT	TAGATTGTTT	GTTTATTGAC	AGAACTAAGA	TTGAAGCCAA	5100
TGCCAACAAAG	TATAGTTTTG	TGTGGAAGAA	AACGACAGAG	AAATCTCCG	CCAAACTTCA	5160
AGAACAGATA	CAGGTCTATT	TTCAAGAAGA	AATCACTCCC	CTTCTGATTA	AATATGCCAT	5220
GTTTGATAAG	AAACAAAAGA	GAGGGTATAA	AGAGTCAGCT	AAAAACTTAG	CGAATTGGCA	5280

934

CTATAATGAC AAGGAGGATA GCTACACACA TCCTGATGGC TGGTATTATC GTTTTCACCA	5340
TACCAAATAT CAGAAAACAC AGACAGACTT TCAACAAGAA ATCAAGGTTT ACTACGCCGA	5400
CGAACCTGAA TCAGCCCCCTC AAAAGGGACT GTATATGAAC GAACGCTATC AAAACTTGAA	5460
AGCTAAAGAA TGTCAGGCGC TTTTATCTCC CCAAGGTAGA CAGATTTTCG CTCAACGCAA	5520
GATGATGTG GAACCTGTCT TTGGGCAGAT AAAGGCTTCT TTGGGTACA AGAGATGTAA	5580
TCTGAGAGGG AAGCGTCAAG TGAGAATTGA CATGGGATTG GTACTTATGG CCAATAACCT	5640
CCTAAAATAT AGTAAATGA AATAAGAACA GGACAAATCG ATAAGGACAA TCAAATCGAT	5700
TTCTAACAAT GTTTTAGAAG TAAAAGTGTA CTATCTAGT TTCAATCTAC TATACAATAA	5760
GAGAATGACT CAAAATAAA AAGCTAGAGT TCCACAATTG GAAATATCTA GCTTTTTTGT	5820
GGTTGAGAAC TATTTTGTCT CAGGCTCTTT ATCTTCTATT TAGGACAAGA GTTTTCTTT	5880
GGTCTTTAAT GATAAAGAAG GTATCAAAAT TTCTAGTCTT CTTTTTTACC TTTAGTAACT	5940
ACTAATCCTG CACTCAAACC TAGAAGAGTT AACCTGCTG CTACTGCTGC TTGGCTTGCC	6000
GCACTACCTG TACTGGTAA CTGGGCTTTA TTAGTTTGAC TAGCTTCACT TGAATCAATT	6060
GGTTTTGTAT CTGCTTTTTC TGACACTTGT GGTTTTTTAG CTTCTTGAGC TACTGGTTG	6120
GTCCAACCA AGACGATGCG GTCTGTCGGA ACTTCTACCA CTTACGGAG TTTTCTTCC	6180
TTACTTCCAT CAGGATTAAT CGCTGTAAAG ATACGTTCTT TTCCAACTT TCCTTCTGT	6240
TCTACACGAG TTTCACCTAG ATACAGTGTT GAATCTTTTT TCTCAACTGT CTTGTATGCC	6300
AAATCTTTTT CAACAAATTC GATTTTTGGA AGATCTTCTT GTACAGCAGC AACTGTCTTC	6360
TCAGAACTG GTTTTTCTT AGTCAAGTGG ATACGGTATT CCTTGACTTG TTTTCCACTT	6420
TCTGAAACGA GCGAACAAG TACTGGAAAG CTATCTTCTC CACTATCTAC CACAGTTGAA	6480
GCTACTTGAT TGTTTTCTTC AACTGAGACT TTTGGCCGTT GACCTTTATA GGTAATTGA	6540
TAGTCTTGAC GATTTTCAGC GAAATCAGCA AGTTCTTTTC CATCTACAAG AATCTTGAT	6600
TGAGTGCTTT CTTGAGGCAA TTCACTTGGT GCAAGGAAGG TCATCTCAAT CATCGCAACA	6660
CCGCTCTTAT CTGCTTTACG CTCCATACGC CATCTCATAG CTTTGGCTTT GATAGCTTTA	6720
AATGTTACGT TGATTTATC ACCAGCTGCA ATGTCTTTAT CCGCACGATA AGGAACAGCT	6780
TCCCAATTTT CTGGATTGTT GAATGGATCG TCTGCCGCGT AGGCTTGGA GTTTGAATAG	6840
TAGGTTGGCA CTTCAAATC TGGACCGACA TAGCGTCTA AAACGAGTT AGATGGTGCA	6900
TCCGTACCAC TATCTGAAA GAACTGAAC TTTCTTGTG TAACAGTCCG TTCTACAATC	6960
TTACCATTTT CACGAAAAT CACACCGCT GATACTCTG GATTAGAAGA TGGTGTGGT	7020
GACCAGTTT TCCAACGACG ATTTTCTGAA TGATCTCGT CATTTGAGATA GTCAACGCG	7080

935

TCATGAGAGT TTTTGTC AAT ATCATTGGTT GCTGAAGCAA AGGCCTGGTT ACTGTTTTCA	7140
TCATAGTTAG GGTATCTGA AAGAGTCTCA CCAAGTTTGT CTGCTACTCG TACAGTGATC	7200
TCAGCAACAA GGTACTACC AAGGACACGG CCTCGAACAG TAAATTGACC TGCTTTTGTC	7260
AGATTTTCCG CTGGAACCTC TTCCCATTC AACTGTCAGGT CTTTGTGTTT GTAGCCGTCT	7320
TTACCTGTGA AGTAACTGG AACCTTAGTC GGCAATTCAA GTGCTTGACC TACTGTAGC	7380
AAGCGAGCTT GTTAAACCGC AGCAACTGGT TTATGAGAAA GTAAGCTCTT ATCCTTAGTG	7440
AAGTGACAGC GGTATTCTCC TAAGATGTCG CCATTTCAG CTTTCGCGAT GACACGAACT	7500
GGCTCACCTT CACGAACGCT TGGAACGACG GTAGCGAGAC CATGTGTGCT AACACTTGCT	7560
GTGACTGCCG GAACTTTTCC ATCTACAGAC TCAAGGTAGT AGTCTGTCAA ATCAGGGTTG	7620
AAGTTTGCTA ACTCTTTGCC GTCAACTTGG ATTCTTGTTT GTCCTTGCTT GGCTGCCGCA	7680
ACTTGTTTCG CAAAGATTG TACCTCTGTG ATAGACGTTT CACGCTGTG ATCTGCTTTA	7740
ACCATGCGAA TACGAACAGC ATAGGTTTCA ACTTTATCAA AGCTAAAGTG GTTCATTCTT	7800
CCAGCCTTGA GTTGAGCAGG GGCTTTTAGA TTAGTAACTG GTTCCAGTT GGCAGATCA	7860
TTAAAGACAT GGTCCTCAT ACCAACAAAA CTAGGGTTT TAGGAGCTGT TGGGACAGTC	7920
TTACCAACAT AATACTCAAT CACATAAGAC TTCGGTACAC CAACTCCATG GTCTTCATGG	7980
AATCCGACAC TTAGATTATC AACGGAGCGT TTGCTCAAGA TACCTGAATC TCCAAACAGA	8040
ACACCGACTG AAGCTTCTGG ATTAGTACGA TTCCAGTTTG TCCAACGATT GGCTGGTTGG	8100
TTATTGTAGG AAATGAGCTT GTCATTAACA TTTGAAACTG GGTCGCTTGG ATTTGAGTCT	8160
GAAGCAAAGG CAAGTGACAA TTCTGAACCG GTCCATTGGT CAGAAATGTT TGCACCTTGC	8220
TCAGTTGAG CAGATACGCG AACATGAAGT TTAGTTGTTA ATTGCGTACC TTCTAAGCGA	8280
CCATTAACTG TAAAGACACC TTCCTTAGCG TATTGCTCTG GACGAATCGC ATCCCATGCA	8340
ACCTTAGCTG ATGAAACGTG ACCATTTGAA TCATATGTCC GAACACTTTC TGGTAATTGT	8400
GGTGCTTCTG CGATTGGAGT TGTCACACTG ACTTCTTCAA CTGAAACGAT ACCTTCTACA	8460
GAGACTTTTG CACGCGCTTC AAGGTCAATT CCTTCAACTT TACCTAGTAC TTCAAATGTT	8520
TGATAGGAGT CTAGTTTTC TTTCGGAATA GCTTGCCAAG TGACTTTATG AGTTTTAGGG	8580
AAACCTTTGT CATACTCAAC TGTTACTGTT GCTGGAAGAC TTGGTTCCTG ATGCAAATCT	8640
GTCCTACAT TTACAGGACG GATGGATTGC GCAATCTTCT TCTCAGTATT GGCTTGATA	8700
GTGAGTTCAA CTGGTCTTT AGCTCCCTCA TATTCAGCGT TCAGAGTGAC TGCTCCTGGC	8760
TTATGCAACT CAAGCATTC TTTACGAATT GCGACTTCCC CTTCACTACT TGTAGAGAAG	8820

936					
GTTACTTTTAT	CAGCTGGTAA	TACAGCTTGC	GTTCCATCTT	GATAGTGAGC	TCGAACCGAC
8880					
AATTTGACAG	TTTGGTCTTC	TTTGAGACTG	TCAGCTTTTT	CCACTTGCAA	GCTCAAGTGA
8940					
GCAATTTTTG	GCGCTTCTTC	AAGGAATTGA	ATTGCATAGG	TTTGAAGAGG	GCCACCATCT
9000					
TTAGGCTGAA	TAAAGATGCT	CGCACGCATG	CCGTTTGCTG	CGCTTGCTTG	AAGAAGTGA
9060					
ACAGCTGCAT	TTTtagCACT	TGCTGTGACT	TCTGGCAACT	TAGCTCCATA	AGCAAGAGTG
9120					
CGGTATTGCA	TTGGTTTTTG	ACTAGTAAGA	CCTGTTACTG	CCTCACCACC	AACCGTTACA
9180					
GTTGGTACTG	CAGGTGCCGC	AGGATTGCCT	TCTTCTACCA	CAAGGGTTGC	ATGAATTGGT
9240					
TGACCTCTTA	AATAACCGGT	CGCTTGAATA	CGAGAACCTG	GAATTGCTAA	CTTAGCTTTA
9300					
TCTTCTTCGG	CAATCTCCCA	CTTGTCCACT	TCATACTCTT	CAACACTTCC	ATCAATCAAA
9360					
ACATAGGAAA	CAGATTTGTC	TACAGAATTC	AAGTCAGTAT	TTGGAGCAAT	ACGTTTCACA
9420					
ACTGGTAGCT	CTGATTAAAG	AGCAATCACT	TCTACACGAG	CTTCTACTTC	TCGTCCGTCA
9480					
GCCATACCTT	TCACCGTTAC	AATACCAGGC	TTGCTCACAT	CTACTGAAGA	CCAGGTTACA
9540					
GGACGTTCTG	CACGGCTACC	ATCACTGTAT	ACAAACGGAA	CAGTGGTAGG	CATTTCAGGT
9600					
GCCTCTCCAA	TAATGGTCTG	TACTTTTGGC	ACTTCTGTCC	CCAAAACAGT	CTTCTCTTGT
9660					
CCTTCTTTCT	TACCAGTAAA	GACAGTGAAT	TGGTTCGATT	TCAAGAGATC	AGAGTGGGCA
9720					
GTCAGGGTGA	ATTTCCCTGC	TTGTTCAAGT	GATTGACAA	TGGCAACACC	TTTACCATTA
9780					
AATGCTTTAC	GAATCCAAGA	ACCATCTGCT	TGCGCCTTAT	AGCGTTACAG	GCTGGCTTGT
9840					
TCTCCGTTAT	CTACACCGAC	CAGTTGACCT	TGGCCATGCA	ATTGGAAGCG	AACCAGATTA
9900					
TTAGCAGTTG	GAACCACATT	CCCCTGGCTG	TCAACAA'TTT	CATAGTAGAT	GTAAGTCAAG
9960					
TCTTTTCCAT	CTGCTGCAAT	CGCATGGTCT	TCCTTAATAA	GACGAACTGC	CGCTGGCTTA
10020					
CCAGCAGTCG	TAATCTTATC	TCGAGCAATT	TCCTTGCCAG	ATTCATCACG	AGCAATTGCT
10080					
TCCAAGGTAC	CTGGTTGATA	GGCAACTTTC	CATTCAAGAT	AAAGTTCATT	AGCATTTGCA
10140					
CCTTCTTGGT	AAGTCCGCCC	ATCGCTGGTT	TGTTTTTTAT	TGAAAGTCTT	AAGACCAAGA
10200					
GATTTTCCAT	TCAAGAACAA	TTCTACACTA	GAAGCATTCG	AATAAGCACG	AACTGGAATC
10260					
TTACCTTCTG	AGTCAGCTAC	TTTGGATGCT	AATCTTTTGT	TTTCCCAGTT	CCAGTGAGGA
10320					
AGAAGGTGTA	CCATCGGTTT	CTTCTTAACA	GAAACCCATT	GGCTTTGGTA	GAGATAGAAG
10380					
TCATGTTTTG	GAATGCCGGC	TGTATCTACG	ATACCAAAGT	AAGAGCTCTT	AACAGGAGTT
10440					
TGATTTTGGT	TGTGCCATGG	TGTAGGTTCA	CCAATATAGT	CCGTACCTGT	CCAGATAAAC
10500					
TGTCCAGCAT	AGCCAGCGTT	GTCACGGTCA	AAAGTCCATG	AAGCGGTTGC	TGTTTTCCCC
10560					
CAACCCACAC	GATCATTTCC	ATAATCTGAC	TGTTCATAAT	TACGCTCAGG	TCCATTGCTA
10620					

TGTTTCAATT CACGTTTCAGG GCGATAGTAA CTTCACGTG TACGGGTAGC TGAAGATGTT	10680
TCTGATCCAT AAATCAACCA TTTTGGATGC TTAGCTCTAA GGGCTTTGTA ATTATCTTCA	10740
GAATAGTTAA ATCCAACAGC ATCGAGTTCA TCAGCAATTT TCTCATGCCC TCCGCTACCA	10800
TTACCGAAAC GGAATTTATC TGCTCCCATG GTAACATAGC GAGTCTTATC AACATCCTTG	10860
ATAACCTTAA CCAAACGTTT AACAGTTGCT AAAGAGTGGG CATCACCATT AGCTTCACCT	10920
ATTCATTAC CAATTGACCA CATGAAGATA GCAGGGTTGT TTTTGCCTCT TTCGACCATG	10980
GTACGTAGGT CAAATCAGA CCAATTTTCA CCTTTTCGAG CTTCTGGGTG AGTGGCATCT	11040
TTTTCAAAGA AACGTCCATA GTCATAAGGT TTCTTGCCAC CATACCACGT ATCAAAGGCC	11100
TCTTCCTGAA CGAGTAAACC TAGTTCTGCT GCGATTGCA AGCTTTGCTC ACTAGCAGGG	11160
TTGTGGGTTG TACGGATGGA GTTAACTCCC ATCTCCTTCA TTTGTTTGAG ACGGCGATAT	11220
TCTGCTTTAT AGTTTCTTTC TGCTCCAAGC GCCCCATGGT CGTGGTGCAA GGATACTCCA	11280
TGGAATTIAA TACGTTTCACC ATTCAAAGAG AAACCTTCAT TTGGAGTCCA GTGATAGTAA	11340
CGSTAACCAA ACAATCCTT CTTAGCATCA ACCAATTGAC CGTCACGGTA AACACGCGTA	11400
ATCAATTCGT ACAAGGCAGG TTTGTCAATTT AAAACAGTCC AGAGTTTGG TCTTTCAACT	11460
TCTAAAATCG CATCTAGGCT TGTTGATTCA TGTGCTTTTA AGGTACGACT CGCTGTACGA	11520
ACTAAGCCTG TTACAGCATG ACCACCTCGT TCAACGATTT GATATTCGGC TACAAGTTCA	11580
TGGTCTTTGT CGTCCGTATT GACGATTTTG CTGGTCACAT GAGTTTCAAC CTTGCCATGT	11640
TGTTGTCTT CAAGTTTGG TGTTAAAATA GTTGTCCCAT TTTTCTCAAC ATGCACCTTA	11700
TCTGTCACTT GTAAAGTCAC ATCACGATAG ATACCACTTC CTGAATACCA ACGGCTACTT	11760
GGCTGTTTGT TGAAGTCATG GACAGCAATC ACATTCCTAC GACCATCTTT TTGAAGGTAT	11820
TTGGTGATAT CATATGAGAA CTGGTTATAA CCATTTGGAT AATGCCCCAC TAACTGACCA	11880
TTGACATAAA CTTGAGAATC CATGTAGACG CCATCAAAAG TAAGGCGAAC ATTTTCTTTG	11940
AGGTCTTTTT CATCTAGTTT GAAAGTCTTG CGATACCAAG CTTCCCCACC GTTGAGCTGT	12000
CCACCTTCAT TTTGTGCAGG AGATTCATGA TCGAAATCGT TAAAGATACT CCAGTCATAC	12060
GGTAAATCTA ATTTTTCCTA CGTAGATACG TCTGCATCAG GTTAAATGGC TTCCTTAGAA	12120
TTTGCAATGA GTTTAAAGTA CCAATTTTGA TTAAAATCCA CTTTCCTGTC TTCAATCATT	12180
TGATTCACCT CTTCAATTTGT TACAGCTTTA GCATCTTCCT TGAGCGGTTT TTCTTGATTT	12240
GAAGCTTGTG ATTCTATCCT TGGAGCTTTT TCTCCGGTT TAGCAGACAC TTTTCTCTCT	12300
TTTGAGTTA CGGCTTCATC TTCTTCTTC TCAGATGCAA TAGCCTCAGT TGAAGTAGGT	12360

938

TCACCTTTGTT CTGTCCTTTC AACTATATTT TTAGTTTCCA AAGCTTTIATC AGCCTTTTCT	12420
TCTACTATCA TTTTTCCTC TTTAGGTTTC TCAGCAGTAT GAGTAATAAG TGTTCATCC	12480
GCATAAACTA CAGATTCCTC AGCTATATTT CCTCCTAATA AACTGCACA AGTCCCAATC	12540
ATTACTGAGC AAGCTCCAC AGCAAACCTA CGAATGCTAT AACTCTTTT CCGATTCCAA	12600
TGGCCTTTCC CCATAAAACC CTCCTTATAT TATATTTAGT GCAGTTAGCT ACTACCAAAG	12660
CCCAAGTGGT ATACATGGTA TGACACCTA GTTCAACAA TTTACACTCT GCGAAAAATCC	12720
AATTCAAAC TCGTCAGTGT CGCCTTGCCG TAGATATGAT TACTGACTTC GTCAGTTTCA	12780
TCTACAACCT CAAAACCATG TTTTGAGCTG ACTTCGTCAG TTTTCATCTAC AACCTCAAAA	12840
CCATGTTTTG AGCTGACTTC GTCAGTTTCA TCTACAACCT CAAAACCATG TTTTGAGCTG	12900
ACTTCGTCAG TCTTATCTAC AACCTCAAAA CTGTGTTTTG AGCAACCTGC GGCTAGCTTC	12960
CTAGTTTGCT CTTTGATTTT CATTGAGTTT ATATTTTATA GGAGCGCATT ATTTTGCTTT	13020
TGCTGCGTAC TCTTCGTTAC GTTTGATCAT TTGTTTTCTG TACCAAGCAA AGATACCGAT	13080
ATAGAATACA AGGAAGACTA CTGCACCAAG GATTGCTTTG ATATCACCAG TTGTAGTGTT	13140
ACCAATTGTC CAACCAAGAA GTTTTTCGAT TGGTCCTTCA AGAGTAGAGT GAGTAATCAA	13200
TTGAGTTTGG CTCACACCTT CTGGGAAGGC ACCTACACCT TTAGCAAGTT CTGTTGCAAA	13260
TGGTGCAATA AGTGACCTG AAAGAAGGAA GAGTGGCAAC AAGAGTGTTT CGAAGATAAT	13320
CATACGGAGC AATTACCAC GAGTTACAAC CAAGAGAGCT GGAGTAACAC CCATAGCGAT	13380
GATACCTGCA AGTGGCAAGA TACCATTTCC AACTTTTGAA AGAAGCACTG CTTCAATCAA	13440
CATGATTGGT GCAAGTACGT TGGCACAAGC CCAGATTTCA GCACGACCAG CGATGAATGG	13500
CCAGTCAAGA CCGATATTGA ATTTACGTCC TTGAAGACGT TTAGTAGCAA CGTTTGTAAT	13560
ACCTTGATGAT AGTGGTTCTA CGGCTGCGAT GAACCATGAA CCGATAAGTG AGAAGAGTTC	13620
CAAAGATACA CCGGAGTCA AACCAAGAGA CAACCATCCT TTGATAACAA GACGCCATTT	13680
ATCTGCATCT GCAACACCTG CAATTGGATG TGGAGTTCCC ATAATACCGA TAACGATACC	13740
AAGGATGAAA CCGATGAAGA ATTTAGATCC CCAGAAACCG ATTTCTTGT TCAATTTAGC	13800
AGCATCAAAG TCATATTTAT CAAGGCCTGG GAAGAATTTT TCAAAAATCT TATCCAAAAC	13860
CATGATAACT GGGTTCATCA TGTAAGTTCAT GTGAGTTGAT GTCATTGGTG ATGAACTTGG	13920
GGCGTTAAGA AGGTCATCAA ATGTAGGTTT CATCAAGTCA GAGTTGATAA TTTTCAACAC	13980
ACCGACAAGG ACGATAGCTG CTGTAGCAAT AAAGAGTGAA ACCCCTTGAC TCACACCATT	14040
GTATATCAGCA TACCATTTAA TCAAGAGACC TGTGATAGAC AAGTGCCAGA TATCAAAGAT	14100
ATCGACATCA AGTGATCTG TTTTCTTCAT AGCTAGCATC ACTATGTTGA CAATCAACAT	14160

939

GATGAGCAAG AAGTATAGTG TCCAAGCAGA ACCCCAAGTG ATTGTAGCAA GTGGTGCCCA	14220
ACCAACGTCG GTAATACTCA ATTTGGATACC AGTGTTTTC ACGAATTTTG CTAGTGATGC	14280
TGAGAAACCA GTGTTTAGCA TACCGATGAT AGCACCGATA CCTGTAAGAG CGATGGCAAG	14340
TTTGATACCA CCTTCAAGCG CTTTGGAGAA TTTCCTCCA AAAAGTAAAG CCAATACTGT	14400
CAAAATGATT AACATGATGA CAGGTCCACC CATTTCTAAG ATGGGATTGA AAACCTTTCC	14460
GATTAGGTCA AAGATTGCAT CCATAACAGT TCCTCCCTTT TTGATGTTAT ATGAATGTTA	14520
ACAAATTAGA ATTAGCTTAA TCCGTGTTCT TTAATAGCTG CTTCAATATT GTCAAATACT	14580
GGAGCGCTCA TTGCTGGGAT ACGGAATAAG ATTGGCCAG CTTGATAAC TGGGATACCT	14640
GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG	14700
TCCTCGTTTA CATCTTTCAC CATGACTGCA TCACAGTGAA CATCATAACC ACGGTTTGAA	14760
AGTTCCTCTT CTAGAGCACT TTTAATTTGG TGACTTGAGT TAACACCTGC ACCGCAGGCA	14820
GCAAGAATTT TAATCATTTA GATTTCCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC	14880
GGTTGCTTCA GCAATGTAAG TATAAAGGGC TTCTGGTTCA GAAATTTTGG ATAGGCTTTC	14940
AAGATGACCA TTCCTGTGA AGAAGTCCAT TAACTGAGCA AGAATGTTTCG TTTGACTTGA	15000
ACTTGAAATTA TTAATGATAA AGAAGAGTAG GGATACTTCT ACTTCCTTAT CAGGAGCTAT	15060
CATATTGTGA AAAGTTATTG GTTTTCTTAA TCGAACCAACC ACCACTTCT CAGCTAGATT	15120
ATGAACAATA TCTGTGTGAG GAATCGCTAC ATTTGGCAAG TCCTTTCCTA GAAATTCAT	15180
ATCTAAACCA GTTGAAATG ACTTTTCACG CGTGATCAAG GCTTCACGAT AAGTTGGAGT	15240
GACAATTTCT CGTCTTCCA ATAAAGTTGC AACCTGATCA AAGAGTTGTT CTGACTATC	15300
CGCTTCTAAG CAAAACACAA GGTTTTGTG AAAGAAATAA TCTAATACCA TAAGTTTTC	15360
CGG	15363

(2) INFORMATION FOR SEQ ID NO: 140:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 28882 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

TAAGACTATT TAATAGTGGA GTGAAATAGG ATACGAACAA ATTGATTAGG AAAATCAAAT	60
GAATTTATAG AAATCTTTTA GCAGTTATGT TATCCTATTC TAGTTTCAAA ACGCTATAGA	120

940

AGCAGCATTG TGCTAGTCKA GATTCAGTTT ACTATACTAA AACGAGTAGC TTGAAATCAA	180
AAAACCCACC CTCACAGGCA GGTTTTATCT GTATTATCA GCTAGATTAT GCTTTACCTT	240
CTGAACCGAA TACGTCGATA CGTCTTCAA CCGATGCTTG GATAGCTTTT ACACCGTCAG	300
CCAAGAATTT ACGTGGGTCG AAGAGTTTTT TCTTGTCGTA TTCTGCTTCG TTGCTTCGT	360
AGTCACGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTCT GTGTTAACGT	420
TAACTTTGGC AACACCAAGT TTGATAGCTG CTTGGATTG CTCATCAGGA ATACCTGATC	480
CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTCG AAGTCGTCAA	540
GGTCAAGACC TTCCCAGTTT ACTGGGTAAG GACCGTGGAT GTTACCGATA CCAGCTGCCA	600
AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTCACCTT	660
TACCGATGAT TCCATCTTCT TCACCACCGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC	720
CTTAGCGTG TGCTTTTTCA ACAACTTCTT TAGCCAATTT AAGGTTTTCT TCAACTGGAA	780
GGTGTGAACC GTCAAACATG ATTGAAGTAT AACCAACTTC GATACACTCA AGTGCATCTT	840
CGTAGTGACC GTGGTCAAGG TGGATAGCTA CTGGTACAGT GATACCCATT GATTCAACAA	900
GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG	960
AAGTTTGGAT CAAAACTGGA GCTTTTTTAG CTTCTGCTGC GCGCAAGATA GCTTGAGTCC	1020
ACTCAAGGTT GTTTGTGTTA AATCCACCAA CTGCATAACC GTTGTCACGG GCTGCTTGGA	1080
CAAAATTTTC TGCTGAAACG ATTGCCATTT TATCAGGCCT CCTGTATATT TTTATGGGTC	1140
ATCCCATTTA CATTTGTCAT TTTATCACTT TTTGCCAAAA AAATCTAGTT TTTCCCGCAG	1200
TTTCGATTGA TTTCTTCTA ACTCCATCTA TGTAAACCCCT TTCCTCCCT AGTCTTGAC	1260
GACTTTTGGA AAATCTATAA AGAAGGTTAA ACTATTCTCC TCCATCTCGA AACGATAAGC	1320
TAATTTTTCA TGTCTAATA GACTCTTAAC CACAAAGAGC CCCATACCAG ACCCCTTGAC	1380
CTTGCGACTG GCATTGTCAG AAAAAGACTG GGCTAGTTTT TCTGTTCCT CTGAGCTACA	1440
GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCAATT CGAACTAAGC CACCTGGAAC	1500
AGAGTGCTTA ATGGCATTGC TGATGAGATT AGAAAGAATC AACTTCATAA CTGATGGGTT	1560
TAGATAAGCC TGCTGATGGG TCAAACATTT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG	1620
CAAGGCATAA TCTTTGACCA GATTTTGCGT CATCTGGAGG AGGTCAATTG TTTCCCTATC	1680
ATCTCGCAAT TCCTGCACAG AAGAGAGGGA AAGTATCTGC AGAACATGGT GATTGAGTTC	1740
ATCCACAATC CCCAAGGCAA CTCCCAGATA CTGGTCTCTA TCCTTATAAC GACCGATATT	1800
CTCTCTCATA TTTTCGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCATGAGA	1860
AGCTCCTCGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGCTT CATTCTTTTC	1920

941

ATGCAAGTCC GCAATAACAG TCAAGAGATG CTGGTAGAGG CTATTGATTT GTTCCTTGAG	1980
ATTACCTATC TCATCCTTAG AATCCACGCG CAATCGCACT TGGGAATCCA GGTCCATCAT	2040
CCGACGGGTC ACCCGCTTGA TTTCCAAAAT CGGTGCAACA ATAGTCCGAG CGTAGATGTA	2100
GGCCACCAAA AGGGAAATCA GAAAGGAGGC CAGCAAGGTA TAGGGAAGAA ACTGGAGACT	2160
GATTTGCTCC GCTTCCTTTT GTAAATCCAT GGAAGCTAGA AACTGGAGAA TCATAGTACC	2220
ACCGTCTTGC GTTTTCACCT CGCGCTCCTC AATAAAGAGA GAGGTTGTCT GGCGGCTCTGT	2280
GTCCAGAGGA AGACTGTCCT TGACTTCTAA CTTGTCCTCG GTCATCTCAC CTTTGACGGT	2340
CCCCTTGATA TCACTAGTCT GGAATACAA GTCTAACACT TGCTCGATAC TCTGCCTATC	2400
TTTCCCTTCT AGGGACTGGG CAATGGCTGT TGCTTTTGA CCAATGGTTT CCTGACGATG	2460
ACTCAGATAA GTCGAAGGAA AAAGAAAATA AATAGCTAAA TGAAGGCAGA TAACCAGAAC	2520
ACTAAATATC GAGAAGGTAT AGATAAATAT CTTTGCAAAT AAACCTGTTT GTTTCATTTT	2580
CGCTCCAATT TATAACCAAC ATTGCGCACA GTGAGGATAC AATCCAAGTC TAGCTTTTTT	2640
CGCAATTCCT TGATATAAAC ATCAATAACA CGGTCAAAGG GAACCTCATC TGTCGCTTTC	2700
CAGACGGCAT CGATAATCTG AGATCGAGTC AAGGCCCGGC CTTCATTTTT CACTAGATAG	2760
TCCAGAATTT CCAACTCTTT GGCATTGATA GGCACCTCTT GACCTGCGAG GCTTGCCTGT	2820
TAGCTTTCAA AGTCCACCTT GGTATCCTTG TAAGAAAAGA TTCGTCCTGT ATCGTAGTAG	2880
CGCTTGAAAA TCGCGTCCAC CCTCACTTTT AAAAGGGAGA GGGAGAAAGG TTTTCCAGA	2940
TAGCCATCTG CCAAAGAGGC AAAGGCACTC ATCTTGTAAT CCTCATCTTG AAAAGCTGTC	3000
AACATCAAGA CAGGAACCTG ACTGGTTTTA CGAATCTCAG CTAGGACTTC TAAGCCGTTG	3060
AGCTTGGGCA TCTGGATATC CAGTAAACC AGGGCCACCT CATAGCTAGA AAATTGCTCC	3120
AGAGCTTCCT GACCGTCCGC TGCCTCAATA GTTTCATAGC CACAATCCGT CAAATAATCA	3180
CTGACCCCTT CACGGATCAT CTCTTCATCT TCTACAATTA AAATTTTCAT ACTTTAACTG	3240
CTCTCTATTT TTTATTTTTT TTAGAATAAA TACCTACCCT ATTTTCTATT ATAGTCTCTT	3300
GCTGGCCTTT TGTCTGCAAG CAACTGACCA CTAGATAAAA CGTTGTGAAA TTCCTTTCTC	3360
ATAAATFCCA TAACTTTAGT ATATTATATT TAAGCACTAA AGTACAAAGA AAGCAACTGA	3420
AAGCAATGAT TTTCAACCACT GCTTTCGGAT TTATTTTGAA TTGTTAAATA GCCATTCCTA	3480
TCCACTATTC TTGAATAGAA ACACAAGATG CAATCTTTAT TCTAGACTCA TTTTTTCAA	3540
TTTATTCACC ATCCAGCAAG AGCTCTTTTG GTTGTTTTCT AAGGAGATTG CTTGAAGCAA	3600
GCGCCATAAC GAGAACCACT AGAACCAAGG CAAGGACAAA AATGATGATA AAGTCTGATG	3660

942

TCTGAATGGA AATGTCTAGG CTCGACAAGG TCTTGCTAAA GCCATCTACT TCTGCACCAC	3720
CACCAAGGTT AGAGGCTTGA GCCGCCTTAC TAGCCTGT'TT GGCAACACCT GAAGTCACAT	3780
TGGCAAGGAC AGTGT'TTCCA ATTGCACGGG CAGTGTAATT AGCTAGGAAG TAAGCAGAAA	3840
CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCCT	3900
GCTTGAGGCC GATAGAGAGG AGAAT'TCCCA CTTCCTTGC GCGGGCGTTG ATCCAAAGGC	3960
TGAGCAAGAG GGCAAGGAGG AGAACTGAGA AGCTCAAGCT ACCCCAGAAG AGGAGGTTGG	4020
CCATCTTGTA CATACCAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTTGA	4080
CGAGTGTGTA GCTCTTCCAG TTGATACCAC TGATGCCATT CAACTCTTTC ATAACATCAT	4140
CCAAGTCTT' GTCTGCTGTT ACAAAGAAGG TTGCGTCCCC ATAAATGGCT GTGTCTTCTG	4200
TGTATCCATA AAGTTTTGCA GCAGTGTGAA TGTCTGTAAT AGCTGTGTTT TCGTAAAGTT	4260
CTTGTGAGTA GGTACTGCT GACTTATTAT GACCATCAA GAGTCCCTTG ATTGTCACCT	4320
CAACTGTTTC CTTGGCTCCT TTTTCATTAT CTGCATCGTA GATATTAGAG TCCAGTTTAA	4380
CCTTGTCCCC TACTTTCCAG CCGTGT'TTG CTGCCAAGTC CTTGTGCAAG AGGATTTTAT	4440
CCTTGTCGTC GTTGGTTAAG TGCTCTCCTT CGACTAGTTT ATAAGAACCA GAGACAACT	4500
TGTCTTCTTT AGAGGAGTCA TTGACACCTG TAATCATCAA GCTACTTCCA AAACGCTTGG	4560
CACGATCAGC AGTGAGATTC TTCTTGTTTT CTGGCGTTTC AATCAGGTCA TATCCAGTCA	4620
AATCTCCGAT AGCGTTGATA CGTTTGACAT AAGACTCAAT GGCCTTCTTT TCGGTGATTT	4680
TTTTGATGTC TTCACCCTTG ATATTCCCAG CACCACGAGG CGTTCCTTGG TTGACGCGAC	4740
GATTGATTTG CATGGAGAAG CTATTGGTGA TATTTTAAA GGTCTCCTGA GAAGCCTTGG	4800
CAGTAGCTCC CTTGATTGAC AAGCCGACCA AACTCAAGCT CGCCATGAGG AGAATAATCA	4860
GGAAGATGAC AATCGATTTG AAAAACTTCC TTGTAAACATA GGCAAATGCG TTGTGTAACA	4920
TAGATTCCCT TTCTAGATTT TGT'TTAAATC ATTCTATTAA AATAAGCTCA AATTATTAC	4980
TAGTATTGCG CGTTTCAGTC AGTTTCTTAT CCTTTAATTC AAGTGTAAATA TCTGACGCTT	5040
GTGCCACTTC TTTACTGTGA GTTACGACAA TCACACATTT ACCTGTTTTC TGGGCAAGTG	5100
ATTTGAGTAG TTCGACAATA TCTCCAGCAG TTTTAGGATC CAGATTTCTT GTTGGCTCAT	5160
CAGCTAGAAT AACTGGAGCT TCTGAGACCA AACTGCGAGC AATGGCAACA CGTTGCTGTT	5220
GACCACCTGA TAACTGGAGA ACATTCCGCT TGATCTGGCT TTCATCCAAA CCAAGCTCAA	5280
GAAGTGATTT CTGCTTGCC TTTTGTGTA CCAATCGGAT ATTTTCCAGC GGAGAAAGAT	5340
AATCTATCAA GTTATAATTT TGAAAGACCA GGGAAATATG GTGCATGCGA TGGTAAGAAT	5400
AGCCCTTCTT ACGAATATCC TCTCCTTGAA AAAGGATAGA ACCTTCAACA GGACTATCTA	5460

943

GACCAGCAAG TAGGGACAAG AGTGTGGATT TTCCTGCTCC TGACTCCCCA ATAATACTGT	5520
AAAATTTTCC GCGTTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT	5580
TATAACGTA GGTAACATCT TGTAAATTGA ATAAAGTCAT GATTTCCTCT TCTTAACATA	5640
TAGATGATAA AATTTCTTTC GGTGATTTC TAAATAAGAA TAGGAAACAA ACGGCTACAG	5700
ATAAGCAACT AAGCAGAACT AGAAAAACAT AGGATTCTGC AAAAGATAAG ATGCTAGTTG	5760
ATAAACTGCT TGCTTTGGCT AGTGTATCTT GTAAGCTTGC CTGATCTCCA CTTGCTAGTA	5820
GAGTTTGGAG TAGGTAAGTT GTGATTGCGT TTCCTGCAAC AAATGCTGGA AGCAAAGCTC	5880
CAAGAGATAC CAAAACTACC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC	5940
CAAGTGCAAG TAAAATCCCC ACTTCATAGA CCCGTCTCT CAACCAGAGA GACAAAACCA	6000
GAATTAAGGC TCCAGCTCCT GCTATCAACA TCCCATAAAG GAAGATGGTC AGGAAGGTTT	6060
GGAAAGTTGC AACTGAGTCT TTGATTGTG CAAAAGCCTT GTTTTCCTTT TCGACTTGGT	6120
AGCCTTGATT TTCCAAGGCC AAGTTTCTA CCTGCTTCAT GAGTCCGTCC ATTCCTTAG	6180
GATTTTCTAC ATAGAAGCGT GCTGCACTGA CTTGAGCTC ACTATTGCCC AAAAGGGTTT	6240
GGCTACTTTC ATAGTCTGTA AAGACTTGAT TTTCACTGAA GTCAGAAGAC AAGCCTGTGA	6300
ATTTCTCTTG TTTTTTACCA GAAAAGATGC CGATAATCTC AACTCTACT GTTTGTCCTT	6360
TTCCAGATTC AGACTGACCA GCATCCAAGC CAATCTTGTC ATGAAGCGAA AGACCGTTCT	6420
TCTTAGCCAA TTCTTCGTGG ATAAGGATTT TCTTGAATC CCCTTTTGA AGGTGTCGCC	6480
CTTCTTTTAG ATTGAAAGCC GAACTGGTAA AGGTACATC CTTGGATGAA TCCTCAAGAG	6540
CCGTAAAGCT AACCAAGTTA TTGTCTGCAG CTGATAAATC ATCACGCTCC ACGCTCTGCT	6600
CGCCAGTCAC TGCTTCTTGT TCTTTTAGTT TTGCGACCGT CTCAAGTTCA GGAGAGACAT	6660
TTTCCAGCCC CTTAATCTTG CTTACAGATG CTAGGTCTGA CAACTTGAAT GTCTGACCAT	6720
TCTCTATCTT CTTAATAGAA AAAGATGTAT TGAGTGATTT ATAAAGATTG CTTTCTACTG	6780
TTTTGTGGA CTTATCAGA GTCAAACAGG CTGAAATTC GGCCAATAAG ACCAATAAAA	6840
TCAGAAATAA AATAAACTT CTCAGTCGCT TTCTGCTGAC ATAAGCCCA GATCTTTGGA	6900
TTGGATTCAT TTGTCACTC CATATTTGTA AGACTATTAT AAAACCCAA TATGAAATAT	6960
TTATGAAATA CGAAAAAAA ATATCGAGTA GGGGATAATC TCTAGCCCCT CTCACACCAC	7020
CATACGTGCC GTTCGGCATA CGGCGGTTCA ACTAACTTT AACGCATGTC GTTCAAGGTA	7080
ATAATCCAAA CACGAAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT	7140
AAGTACCGAC TTCTGAGCTA CTATAGTAG TTGAACTAG AATAGTACAC CTCTACTTCT	7200

944

AAAATATTGT TAGAAATCGA TTTGACTGTC CTGAACAATT CGTCCTATTC TTATTTTCATT	7260
TTACTATAAT TGATAGTGGT CGCCCCAGCC AGATACCTTA TCTGCTATCC ATTTAGGAAC	7320
CCCTAACTTA AGCAATCCCC ATAATCGTCT CGATTTCTTC TTCCATTGCT TCCAGATAAT	7380
CACCTCGTAGG CGAGTACGCA AGCGCTCATC TATGCTAGTG ACTATACTTT TCATATTTAT	7440
AATTCATTCC TTTCGTTTCA CTCAAGGCAC AACACAGAAT GAAAAAGTGT TGTGATCTTT	7500
ATTTTGTTTT AATAAATAG TGAGAAAACC TATCACTACT ACAAATCACG GGGAGGTGAA	7560
TAAGTGAGTG GTACAGCCAC TACCTCGCAT ATTTTGTAC ATCATTTAAC GGTACATAAT	7620
AAGTTGTACC ATCTGAATAA GTTGCTACAA TATCATTTGC ATGCTCTCCT TCACCTTTAG	7680
CAAAGGTGG AGCTCCTGCT GGATGATTTT TATTTGCCTC TTTCAATTTT TCAATAATGG	7740
CATTTTTTCT GTATCTTTTA TATTATCAGG ATTTTTCACT AAGATTTTGT CTGGATATGT	7800
CGGTTTAGCA GAAACAAATT TTAAGTTTAC TTCTTTTFTA TTCGAAGCAC TTGTCCAGTT	7860
TCCAGCATTA TCTTTAGCAT TTAATTTTAC AGTAATTCCT GAACTAGGAA CTTCAGTAGC	7920
AGGTTGATTA TCAACATTAT TCAACTTTAA TTTCAAAGA GCTGTTGCAT CAGACGTTT	7980
ATCAATCGTT ATATATAATG ATGAATGTT ATTATAAACA GTTCCTTCAT ATTTAGCTGT	8040
TTGTGAGCTA CTTGAAACAG AACTGAAATT ATACCCACTA CCTCCCTGAT TATCTTCAAT	8100
GCTTACGTCT AAATGAACCT CCCCACTATT ATTTGGCTTA GCAACAACCTG TTATAGTAAA	8160
ATAACATAAA ATTTGCATAA ATAGATTAGG GAAATCAAAG CAGCTTCTAG GAATGTTTTA	8220
GCAGTCACAG TGTACTTTCC CAGCATCAAG CCACTATAAC TCTGCACATA AAAATGGAGA	8280
AGATGGCAAT CCTCTTCTCC AAATATTAAC TTCTTTTCAA ACCAACTATA GTTGACAAAG	8340
AACCTAAAA CAATTGATAA CACAAGGTCA GGTCGGTCAA CTCTTTCAAC TGAAGCCCTG	8400
TCAACTCTTC CCATTTATCA ATCTTGATTT GGAGAGAATT GCGGTGCAGA TAGAGTTGCT	8460
GGGTGTTTT AGTGAGAACA GCACTATTTT CCCAAAGAGA GAGAATGATT TCCTGAATCT	8520
GATCTTGATC CAAAATCATC TGGTGTAGAC ATTCTTGAT TGGCTTCAAG TCCACGAGTC	8580
TTTCTCCCAT ACTCCAAAGA TAGAGCTGAG AAAAAGTATG AACACCTTGG TGACCCCTGAC	8640
GCCACCATGT CTTGAACAAA TCCCGCTCAG CTTTGATTAA GTCTGATAGG GCTTGATGTC	8700
CCGTCTGAGA CCAAACCTGA CCCAACATGA TAGAAAGACG AAGTCCAAAG TCATACTCAA	8760
CCGCTTCAAT CGTATCACTT AAAATATCTC TTACAGAAGT GTATTTGTCT TGTGAAGCA	8820
CGAAAACATA ATCCTGAGCT CCGACCTGTA GCACTGTCTG ACAATTTCGA AAAAGAGTCC	8880
GCATCATATC TAGCCAAGAA GCCAGATTTT CCTGCTGAAA ATAAGAAAAGA TGGCAATAAA	8940
CCAACTGAAT CTTTTTAAAA ACTTGCAGTG CCTGTCCCTT GCCCTCAACC AGATAGGAAT	9000

945

ACCAAGGGTT TAGCGAACGA GCCTGCTCCT GCTGGGTCAA AAGGGCAACC AACTGCTTTT	9060
CACGCTCGCT GAGCCCAGCT TCCTCCAGCA AAATCCACTG CTGAGAAGCT AAAGGGAGCG	9120
TGAGATAGCC CTCTTTCTCT ACTGGTTGGT CTGAAATCCG AGCCTCAGGA AACCAGTCTT	9180
GTAGTTCTTT TGGCCTCATG TTCTAGCCCT CCACTTTTTG GATGCACCAT GAAACCAAAC	9240
TCTCAAGACG TTCCAGATTC TCAGTCATAT GGAGATAGCC CATAACCGCT TCAAATCCCG	9300
TGGACATACG ATAAGTCACG ACATCTGCAT TTTTAGCCTT TGTGTGGCTA TTGGTATTGC	9360
GGCCACGTTT GTAGATTCTT TCTTCTTTT CCGTTAGGAC CTGCTCCTCC AACATGAGAG	9420
CAATCAGGCG AGCCTGAGCC TTGGCTGACA CGTACTTAGT TGCTTCTGA TGGAGTTTAT	9480
TGGGTTTGGT CATACCTTTG AGGATGAGGT GACGGCGAAT ATACATAGAA TACACCGCAT	9540
CCCCCTCAA GGCTAGCGCA ATCCCGTTAA TGAGATTGAC ATCAATCAGC TGTCCACCTC	9600
ACTCCATCCT TGGTATCAAG GAGCTTAAT CCTTGAGTAA CCAATTGGTC ACGGATTTGG	9660
TCTGCTGTCG CAAAGTCACG ATTGGCACGC GCCTCTTGGC GTTTTGAAT CAAGTCTTCA	9720
ATCTCTGCAT CCAAACTTC CTCAACAAAG ACAATTCOA AAATTTCTAA CATATCTGCA	9780
AGAGCTTGCT TGACACTTGC ATCATAGTTC CCTGAGTTGA TCCATTTGGC CATTTCAAAG	9840
ACAACTGTGA TACCGTTGGC AGCATTAATA TCTTCATCCA TAGCTGCTAC AACTTATCT	9900
TTAAAGTTTT GTAACCTTG GGCATCCACA TTCTCTGTAA ATGGTTGTC GTAAGTATTC	9960
TTGAGATACT TGAGATTGGT CTCGGCATCG CGAACTGCCT TTTCCGTGAA GTTGATAGGC	10020
TTACGGTAGT GCTGGGTCGC AAAGAAGAAA CGAAGTACTT GCCCATCAAG AGTTTAAAG	10080
GCATCGTGTA CCGTAATGAA GTTACCCAAG GACTTAGACA TTTTGACATT GTCGATATTG	10140
ACAAAGCCAT TGTGCATCCA GTAGTTAGCA AAAGCCTTGC CTGTTTTAGC TTCAGACTGG	10200
GCAATTTTCA TGGTGTGGTG TGGAACTCT AGGTCAGCTC CACCACCGTG GATATCAATG	10260
GTATCACCTA AAATCTCTGT CGACATGACT GAACACTCAA TATGCCAACC CGGACGTCCA	10320
GGTCCCAAG GACTATCCCA AGAAATCTCA CCTGGTTTGG AAGATTTCCA TAGAGCAAAG	10380
TCTACAGGAT TTTCCCTACG AGCCGTTTCT TCATCGGTAC GACCTGAAGC ACCTAGCTCC	10440
AAATCTTCCA AGGTTTTATT AGCCAATTTA GCATAGTTGT GCGATTTTTC TACACGGAAA	10500
TAGACATCCC CTTGACTCTC ATAGGCAAAG CCTTTCTCGA TCAAGTCTTC CACAAAACGG	10560
ATGATGTCTG CCATAAATC CACTACACGC GGATGGCGAG TCGCAGGTTT CACGCCAAT	10620
GCCGTACAT CCTCACGAAA GGCAGCGATG TACTTATCCG CAACCTCCTG AGGCGTGATA	10680
CCTTCTTCCC TGGCACGGTT GATAATCTTA TCATCCACAT CTGTAAAAAT GGAAATATAG	10740

946

GCAACCTTAT ACCCACGGTA CTCAAAATAG CGACGAATCG TATCAAAAGC TACCGTCGAA	10800
CGGGCGTTTC CTACGTGGAT ATAGTTGTAC ACCGTTGGCC CACAAACATA CATCTTGATC	10860
TTGCCGTCCT CAATCGGGAC AAATCTCTCGC AAATCACGAG ACATGGTGTC ATAGATTTTA	10920
ATCATAAATC ATAATCAGGA AAGCTGAAAT CCAAGAACAA TTAGTTTCAT CACTAAAAGT	10980
TCAAGTAAAT TTCAGTCCGA ATATCTCTAC ACTTCGGAAT CCCTTGCTCC TTTCTCATTC	11040
AGATAAACCA CCTGAGTCTG TTTGACAAAG CCAATTTTTT CATACAAACG TTTGGCACCT	11100
ACATTGCTAT CTTCCACTGC AATCTGAAAT TCCTTGTCAT TTGCTCAAT TAGTTGGTTG	11160
ACGAGGGATT TTGCTAAGTA GCTTCCATAG CCTTTTCCAC GTTCAGGTC CAATATTGCT	11220
AAACCGTAGA GGTAAATCGT ATTAGTCGAT AAATCAACCG TACAAGTTCC AATAACCTGA	11280
CCAGCTTTTA ATAAAATATA TAGTCGGCTT TCTGGATCTT TCAGAGCTTC AGCGACATAT	11340
CTATCCACAA CTTCTCTCGA TTCATGTTCC TCTGAAAATG CCTGAAATTT TAATTGACTA	11400
ATTTGATCCT GATACGAAT ATCTGCTAAC AAAACTTCAA GATGGGAAAC ATTTGCTAAC	11460
GGATAAGGTC TTCTATCCTT ACCTAACCAA GTTCTGTCT CTTCATCCTC GATTAGTCCC	11520
CAGTTACTGG CAAAGTCAGG ATGATTCTCT AAAAAATAC GTTCTGTCTG AAAAGTGACT	11580
GACCGAATGG GGAAGAAGC TGTTCCTCTC TCAAACTAG TAAACAATGC ACGCGCAATC	11640
CCCTGACGGC GATGACCTGG ATGAACCAGT ATCGTCACCT CTACATCTTG GTCATCTGCA	11700
TAGACAGTTA ATAAACCAAC AAGTTCGCCT TTTTCATAAT AAAGGAAAAA GGCGGGCATG	11760
TTTGGGTCAA AATTAAGCAT GTTAGAGAGA TAGGGATCGC GATAGGTACC GTCATAGTTT	11820
TGGCAACAGT TAATTACTTT TTTGCGCTCA GATAGCTCCT CTGGGCTTAA CTTGTTTCTT	11880
GCTTGAATCA TATAGGTATC CTCTACAAAC CAGACGATCT GTGACTGGCA TCTTTAGCCT	11940
GCTCGAGTTT ATTGACATAA TACTCTCGTT TTTCTTCGAC TTCGTGAATG ACAGGCTCAT	12000
CTTTCTTACC ATGAAGACGG ACAATCTTGG CCGGAATACC GACAACCGTC ACGTCACTAG	12060
GTACATCTGC TACGACAACT GCTGCAGCAC CGACCTTGGC ATTTTCACCA ATTTCCACAG	12120
GCCCCATAAC TTGGGCATGG GCTGATATGA GGGCTCCCTT TCGTACAGTC GGATGGCGTT	12180
TGCCACAGTC TTTCCCTGTT CCCCCGAGAG TCACTCCGTG ATAGAGAAGA ACGCCTTTTT	12240
CAACAATCGC TGTCTCTCCA ATCACCAGAC CAGAACCATG GTCAATAAAA ACACCTGAAT	12300
CAATCTGGGC TCCTGGATGA ATCTCAATCT GAGTCCAAAA GCGCCAAAAC TGACTGTACA	12360
TACGAGCTAA TAGTTTGAAG CCGTGCTTCC AGAGAAAATG CGAGAGACGG TGGGCCGCCA	12420
AGGCCTTGAC ACCTGGATAA GTCAGCAAAA CCTCCAAAGT GGTGCGGGCC GCTGGATCAT	12480
TTTCTTTTAC AATATCAATG GTTTCGCGCC ACCACCCCAT ACATTTCTCC TTTTCTTATT	12540

CTGAATCTTT	TGATGTTTCT	GTAAATTCTT	TCTTAGGTTT	GTAATCCTTT	TGATGACGTG	12600
GGCGGTGAGG	GCGCTCAGAC	TTTTCACCTT	TTTCATCATG	CTCAGGTTTT	GGCGGACGAG	12660
GTAGAAGAGC	CTTCATAGAG	GCATCGATAC	GGCCTTTTTC	ATCAATTTTG	ATAACCTTAA	12720
CATCAACTTC	ATCCCCGATT	TCTACCAAAT	CCTCTACACG	ATTGGTACGA	GTCCAAGCCA	12780
TCTCAGAGAT	ATGAACAAGG	GCATCTGTCT	TATCAAAGAG	GTTAACAAAG	GCACCAAATT	12840
TCTCGATACG	AACGACTTTA	GCACGGTAAA	CTTCATCCAC	TTTGGCTTCA	CGAACCAAAC	12900
CAGCAATAAT	TTCTTTGGCA	CGGTTAATAG	CATCTTGGTC	ACTAGAGTAG	ATAGACACAT	12960
TTCTTCTTTC	GTCTATATCA	ATCTTAACAC	CTGTTTCAGC	GATAATCTTG	TCGATGGTTT	13020
CTCCACCCCT	ACCGATGACA	ATCTTAATCT	TGTCCACATC	AATCTTGATC	GTATCAATTT	13080
TCGGAGCAGT	TGGAGCCAAT	TCTGGACGAA	CTTCTGGAAT	GTTTGCTTCA	ATGACATCAA	13140
GGATTTCAAA	ACGCGCTTTC	TTGGCTTGAG	CAAGAGCCTC	CGTCAAGATT	TCTGCAGTAA	13200
TCCCTTGAAT	CTTGATATCC	ATTTGAAGGG	CTGTAATCCC	ATCACGAGTA	CCTGCAACCT	13260
TGAAGTCCAT	ATCTCCAAAG	TGATCTTCCA	AACCTTGGAT	ATCTGTCAAT	ACTGTGTAGT	13320
TATTTCCATC	TGAGATAAGC	CCCATAGCAA	TACCAGCTAC	TGGCGCCTTG	ATTGGCACAC	13380
CACCAGCCAT	AAGGGCAAGA	GTCCCGCAC	AGATAGAAGC	TTGAGATGAA	GAACCGTTTG	13440
ATTCAAAAAC	TTCTGCTACT	AGACGGATAG	CGTAGGGGAA	TTCTTCCAAG	CTTGGCAAGA	13500
CTTGAGCAAG	AGCACGCTCA	CCAAGGGCAC	CGTGACCGAT	TTACGACGA	CCTGGCGCAC	13560
CGTAACGACC	TGTTTCCCCT	ACAGAATATT	GAGGGAAGTT	ATAGTGGTGC	ATAAAGCGTT	13620
TCTTGTAATC	TGGATCCAAA	CCATCAATGA	TTTGAGTTTC	TCCCATCGGA	GCCAAGGTCA	13680
AGACTGAAAG	AGCTTGAGTT	TGCCCACGAG	TAAAGAGACC	TGAACCATGT	ACACGAGGAA	13740
GGAAGTCAAC	AACCGCATCC	AAAGGACGGA	TTTCATCGAC	CTTACGACCA	TCAGGACGCA	13800
CCTTGCTCTC	TGTAATTAAA	CGTCGCACCT	CTGCGTGTTC	CATTTGTTC	AAGATTTTCAG	13860
CCACATCAG	CATAATACGG	TCAAATCTTT	CGTGGTCCGC	ATATTTTTCT	TCGTAAACGG	13920
CAGTCACTTG	GTCTTTCACT	ACTTGAGTCG	CAGCTTCACG	GGCCAATTTT	TCTTCTACTT	13980
GAAGTGCCTT	TTGGAGGTCA	CTGTTGTAGG	CTGCAATGAT	TTTACGCTGC	AATTCAGCAT	14040
CCACGTGAAG	CAATTCCACT	TCTGCTTTTT	CTTTACCGAC	AGCAGCAACG	ATTTCTTCTT	14100
GGAAGGCAAT	CAATTCTTTG	ACAGCTTCGT	GCCCTTTAAG	GAGCGCTTCC	AACATGATTT	14160
CTTCTGACAA	TTCTTTGGCA	CCAGACTCTA	CCATGTTGAT	AGCGTGCTTG	GTCCAGCTA	14220
CTGTCAATTC	AAGAAGAGAT	TGCTCTGCTT	GTTCTTGACT	TGGGTGATG	ATGATTTGGC	14280

948

CATCTACATA TCCCACTTGT ACCCCAGCAA TTGGTCCGTC AAATGGAATA TCTGAAATAG	14340
ACAGTGCCAA AGATGAACCA AACATAGCAG CCATTGGTGC AGATGCATT TCAATATAAG	14400
AAAGCACTCT ATTGATGACT TGGACTTCAT TACGGAAACC TTCCGCAAAC ATAGGACGAA	14460
TCGGACGGTC AATCAAACGC GCTGTCAAGG TCGCATCTGT TGAAGGACGT CCTTCACGTT	14520
TCATAAAGCC ACCAGGAAAC TTCCCAGCCG CATAATTTT TTCTTCGTAG TTGACTTGGA	14580
GTGGGAAGAA ATCCCCAGTT GCCATTTTCT TAGACATAAC GGCAGCAGTC AAGACAGTTG	14640
ACTCACCGTA ACGTACGACA ACAGATCCAT TTGCTTGCTT AGCAACCTGA CCAGTCTCTA	14700
CAATTAAGTC ACGACCCGCA AAAGTCGTTT GAAACACTTG TTTTGCCATT TTAATCCCCT	14760
TTGGATTGAT GAAATTATAC GCCTTGCCTA CAAAGATCAA GATACCAAGG ACGTCAAAAG	14820
CAAAGTAAAA ATAGGAAACT GACGAAGTCT TCGATGAAGA CAAGACAGTT TATCTTTTTT	14880
ACACAGCTTT TCGGCCGTGT TCAATTACAC AAGATATTTT GGACGGTTCG GCTTGCCGAA	14940
CATTTCTGTA GAAAAATAGG AAGGTGACGT CGCACTCGAC GAGTGCTAGG AAGCTTATCT	15000
TTTTTCCTAA GAAATGAGAC CAAAATTCAA STCATCAAGA TACCAAGCCG TCAAGCAACT	15060
CAAAGGAAGA TAGGAAATCG AACGACGGAG CGACTACTCC TAGGGAGATT TATCTTTTTT	15120
CACAGAGTTG TAGGCAAGTT CAGTTTTCOA GATACATCAT TAGAAAGGTT TAATACTAAA	15180
GTATCTAAAG CTTTCACGCT AATCGCTATC GGGCGATTAG CTAAATGCTT TACTAACTCT	15240
CTCGTCAAT AACATCGATT TGACTCACTC GTGTCGTTAA ATCTTACAGT TTAATGTCAT	15300
TGTATTATTT AATACCTTCA TCTTTGTATC AAGTACGTAC AGAATTTATT TTATCATATT	15360
TTTCTTAAAA AGTGAGGTCT TTACCATTAA AAAGGAACCA TTCCCTCAC CTGAGAAGAA	15420
TGGTTTGCTT TTATTATCCT AGAGACTGGT GATTAAACAA GGCATGGGTT GCTTGATGGA	15480
TGTATTTTGC TGTATCAGCA TTATTCATCG TATAGAGATG CACACCGGCA ACATCCTGAG	15540
TTACCAAGTC CACGATTTGG TCCACTGCAT AGGCAAGTCC TGCTGCTCTG AGCGACTCAG	15600
GGTCATGCTC ATACTTGTCT AAGATGGCTT TAAATTTGCG TGGAAGATGG ATATTCTCAC	15660
AAGTCTTCAA GAGTCGGAGA GCCTGATTTT GATTCAGAAT TGGCATAATT CCTGCATGAA	15720
TGGGAACATC AATCCCAGCC AAGATACACT TGTCTGAAA ATCATAGAAG CGCTCATTTG	15780
CAAAGAAGAG CTGAGTTACG AGGCTCGAAC AGCCTGCATC CACTTTCTTC TTAAGATTTT	15840
GAATATCTGA AATCTGATTT GGCGAATCTG GATGCCCTTC TGGATAGCAA GCTCCAATAA	15900
TATCAAAGTG AGGGGTTTGT TCCTTGATAA ACTCAATCAA GTCGGTTGCA TAGCGGAAAT	15960
CCTTTTGTGG TTCCACGTCT GGAATAATAT CCCCACGAAG AGCCAAGATT TTCTGCACCC	16020
CAACTTTGTC CAAGTCAGCA ATAGTTTCAG CAACCTTCTC CTTAGTTAGA TAAATAGCTG	16080

949

GCAAGTGGGC AATGGTCGGA ATCGCCAAAT CATTTTGGAT AAAGTCAGCC AAACGAACCG	16140
TCGTTTCCTT GATATTAAAT TTATTATTGC TGGCAGTTAC ACTGATAAAA TGGGGAGCCA	16200
ACTCCTGCAT ATCCTGCAAG GCTGAAATAA TGTATCATTT ACCCACGGCT GGGTTTGGAG	16260
GGAACACTTC AAATGAGAGT GACGGTGTTT GCGGTGACAT ATGTAATAAC CTTTCTAGT	16320
TGATTTCTTT TTGAACAACC ACTGTATGGA GAGAAATCCA ATCTTACAAT TTCTCACGCG	16380
CAGCTTTAGC TGCTTCAACA AGGCGGATCA AGCTTTCTTT TGTTTCTGGG ATACCACGTG	16440
TTTTCAAACC ACAGTCAGGG TTGATCCAAA CTTTCTTGCT TGGCACTTTA GCAAGGATGG	16500
CTTCGATTGT GTTGTGATT TCGCCCTCAT TTGGTACACG AGGTGAGTGG ATATCGTAAA	16560
CCCCAGGTCC CACTTCTGTT TGAAGTTTT TCGCTTGAG TTCGTCCAAG ATTTCAAGGT	16620
TTGAACGGTT AGCTTCAAAG GAAATAACGT CTGCATCCAT GTTATCGATA GCTGGGATGA	16680
TATCTGTAAT TTCTGAGTAA CACATGTGAG TGTGGATTGG TGTGTCTGGC GCTACTGTTG	16740
AGTGTACCAA GCGGAAGGCA GGAATAGCCC AGTCAAGGTA GTCTTCGTAC CAGTCGCTAC	16800
GGCGGAGTGG CAATTTTTC AAGAGACGAG CCTCGTCGAT TTGGATGATT TTCACACCAG	16860
CAGCTTCAAG GTCAAGTACT TCATCCTTGA TAGCAAGGGC GATTTGGAGA GTTGAATCCT	16920
TGATAGAGAT GTCTTCACGT GGAATGACC AGTTAAGGAT GGTAACAGGT CCAGTCAACA	16980
TACCTTTAAC AGGTTTGTGT GTACGACTTT GTGCATAGCT AGACCATTTA ACAGTGATAG	17040
GGTTAAGACG AGTGACATCA CCCAGATGA TTGGTGGTTT TACCCACACG ATACCGTATG	17100
ATTGTACCCA TCCATTTTTA GAGAAGAGGT ATCCTGACAA GTTTTGACCG AAGTACTCAA	17160
CCATGTCATT ACGCTCAAAT TCACCGTGAA CAAGGACATC AAAGTCAATA TCTTCTTGCC	17220
ACTTGATCCA TTCGTCAATC GTTTCAGCAA GGAAGCGTC GTACTCTTTT TGAGACAATT	17280
CACCTTTACG GTAAGCCAAA CGTTTGGCAC GAACCTCTTT TGTTTGAGGG AATGAACCAA	17340
TCGTTGTTGT TGGAAGAGCT GGAAGTTTGA AAGCTTCTTC TTGGATAGCT TCACGTTCTG	17400
CAAAGGCTGG CAAACGAGTG TAGTCTGCGT CTGTCAAGCC AGCGATACGC GCACGAAGTT	17460
CAGCATTTTC ACCAACACGC TCAGTCGCAA AGAGTTCTTT GTTGGCTGCA AGAGCTTCTG	17520
AACCTTGACC ATTTTCGGATA GCATCCAAGT CACGGATTTC ATCCAATTTT TCAACTGCAA	17580
AGGCAAAGTG GTTCAAGAGT GCTGGTTCAA ATTCTTCATT AGCAGTTGTA AATGGCACAT	17640
GAAGAAGTGA GCAAGAGCTT GTCAAAACGA TGTTTTCAGC TGGAATTGTC TCAAGAACAG	17700
CCAAGCTCTT TTCGTAGTTG TTGCGCCAGA GTTTTTCACC ATTGACAATA CCTACATAGA	17760
GAGTCTTGTC AGCTGGGAAG CCACCTTTAA CGAGTTCAAG AGTTTCTTCA CCTTCAACAA	17820

950

AGTCAAGACC GATAGCATCT ACTGGTAAGT TTACAAGGTC AGCGTATACG TCACGAACAT	17880
CACCGAAATA AGTTTGAAGC AAGACTTCAA GACCTTTTTT GTCAGCCAAG AGTTTGTGT	17940
AAAGGTTCAA GAAGAGAGCT TTTTCTTCAG CTGTCAAGTC TTTTACAAGA GCCGCTTCAT	18000
CCAATTGGAT GCGAGTCGCA CCAAGTTCAG CCAATTTAGC AAAAAGTCTT TGGTAAGCAG	18060
CCACTAAGCT ATCTACGAAG TCGTCTGCTT TCACGCCTTC TTCAAAGTCT GACAATTGAA	18120
GGAAAGTGAA GGGACCTACA AGAACAGGAC GAGTGTTCAT TCCAAGTCTT TTGGCTTCTT	18180
GGAAGTCATC GAAAATCTTG TGACCAGCCA ATTTTACTTG AGTGTCTTTT TCAAAATTAG	18240
GAACGATGTA GTGGTAGTTA GTGTTGAACC ATTTCTTCAT TGGAAGGGCG CGAACGTCCC	18300
CTTTTCTCC CTGGTAACCA CGTCCCAAAG CGAAGTAGCG CTCAAGGTCA GACAAGTCCA	18360
AGTTTTGAAC GGATGCAGGC ACCACGTTGA AAAGGAAAGC CGCATCTAGG AAGTTATCAT	18420
AGTGAGAAAA GTCATTTGAT GGAATTCAG TGATGCCTTT TTCTTTGACA ATGTTCCAGT	18480
GTTPAGCACG CAAGTCTTTT GCTGCTGCTA AAAGTTCTTC TTCTGAGATT TCTTTTCTAA	18540
AGTATTTTTC AGTTGTAAAT TTAAATTCAC GGAATTCGCC CAAACGAGGG AAACCGATGA	18600
TTGTAGTTGA CATGATGTGT CCTCCAAAAT TTGTTGTGA AACTATCTTA ACAGAAAAGA	18660
AAGCGTCTGT ATAATTGTAA AAAATTAGGG TTTGATATAG TTTGAAACTA TATATCTGTT	18720
TCGGACAAAA GAAAAAGACT TGAAGCAAAC GTCTCAAATC CTTTGTAAAT CTTACTTTAC	18780
AGCTATATTC CAATTAGAAT ACTAAAACAT GTTATTAGTA ATTCTTATAA GTGACTATGA	18840
CCTGTTATTA GAAAAGACTA TAACTGATTC TAGTCAACTT TTTCCCTGTT CAAGTGGGAC	18900
GATTGCTAGT GTCTTTCCTA AACTGGCTAG GACTTTTAAG ACTGTATCCA ACTGAGGACT	18960
AGTCTTTCCT GTCTCCATCC TAGCTATGAC AGGCTGGCTT ATTCCACTGA CTTCTTCCAG	19020
CTTTTCTGA CTGATTCCTT GTTCATACCT AGCCTCAATC AACTCGCTCA TGATAGCCAC	19080
TCGCATATCA CTTTCAAGGA TTTCCTCCTT GCTAAAGAGC TCAGATGGAC ATCCTTCCAA	19140
TTACTCCCAA TAGCACTATT CTTCATCACT TAACCTCCTT TTTTITACGT CTATGTATTT	19200
TTAAAAAAT GAGCGAATTA TGATTCGATA GATTGACCAG TGGGTTTAAA GTTGGTGCTA	19260
GCCTATTCTT TAAGCGATTT TCCTTTTCTA GGATAAAGCA GTTCCTGCTT GCTTAACCCC	19320
AATTTTCCAC GATGAATCCA ATAGTAAATG GTTGAAATTC CCACGTAAAC CCCTTTAGCC	19380
ATCACCATCA TTTCAAGGCA AAATTTTGG TTATGTTTTT GGTATGTAT AGTGGAGAAT	19440
CTTTTCCTTT AGTTTCTTAA GACTGTTGAG CGTAGTCGGC AGAATAAATC TCTTTGAAGC	19500
GCCCTTTTCC AAGACATTGT CGGACTGTCC CACGCTTGAT TTCAGTGTGG ATAGTTTGAG	19560
GAGCTTTTCC AAGTAGAGAG GCAATTTCTC TATTTGATTT TCCTTCTTTT TTCCATCGTT	19620

CGATTAAGCG	ACGGCTATCG	ATTGTCAAAT	GTTTGCCTTT	TGTAGTATAA	TTGTCTTGCA	19680
TTTCGTGACC	TTTAAATCAT	TTCAATCTTA	AATTGGACTT	TTTTTACTTG	GSTTGTAATT	19740
AATCTATGAG	GAAGACAAGA	AAAAGAATAT	CAATCAAGTA	AAGTCACAAA	GTCACATTAG	19800
CTCCGAGCAA	CCATTGCAAA	TTGAGGFACT	CACACAATGA	TTAAAACATT	TCTCTCTGCC	19860
CTTTCGGTCA	TTCTCTTTTC	TATCCCTATC	ATAACTTATT	CTTTTTTCCC	ATCTTCTAAT	19920
CTTAACATTT	GGCTATCTAC	CCAACCTATC	TTGGCACAGA	TTTATGCCTT	CCCCTTAGCT	19980
ACTGCAACTA	TGGCTGCTAT	TTTAAGTTTC	TTATTTTTTT	TCCTATCTTT	TTACAAGAAA	20040
AATAAACAAA	TACGGTTTTA	CTCTGGCATT	TTGCTCTTAC	TATCGCTCAT	ATTACTATTA	20100
TTCGGAACAG	ATAAAACCCCT	TTCTTCTGCA	TCAAATAAGA	CTAAAACCTT	AAAATTAGTA	20160
ACTTGAACG	TCCCTAATCA	AATAGAAGCA	CAACATATTG	AGCGAATTTT	TAGCCATTTT	20220
GACGCCGATA	TGGCTATATT	CCCTGAACTA	GCTACCAATA	TCAGAGGTGA	GCAAGAAAAC	20280
CAGAGAATCA	AACTATTGTT	TCATCAAGTT	GGACTTTCTA	TGGCCAACTA	TGATATTTTC	20340
ACTTCTCCAC	CTACCAATAG	TGGAATAGCT	CCTGTGACTG	TGATTGTCAA	GAAAAGTTAT	20400
GGTTCTTATA	CAGAAGCTAA	AACTTTTCAT	ACAACACGGT	TCGGGACAAT	TGTATTACAT	20460
TCGAGAAAAC	AAAATATACC	AGATATCATT	GCCTTGCATA	CTGCGCCTCC	TCTGCCAGGT	20520
TTAATGGAAA	TCTGGAAGCA	AGACTTAAAC	ATCATTTCATA	ATCAATTGGC	TTCAAAATAT	20580
CCAAAGGCTA	TTATTGCAGG	TGATTTTAAT	GCAACTATGC	GTCATGGAGC	ACTTGCAAAA	20640
ATAAGCTCTC	ATAGGGACGC	ATTAAATGCA	CTGCCACCTT	TTGAAAGAGG	AACTTGGAAAT	20700
AGCCAAAGTC	CAAACTTTT	TAATGCAACA	ATAGATCATA	TTTTTATTGCC	TAAAACCAC	20760
TACTATGTTA	AAGATTTAGA	CATTGTAAGT	TTTCAAACT	CTGATCATAG	ATGTATTTTT	20820
ACAGAAATCA	CATTTTAATT	ATTTTATATA	AAATCACCCC	TCTAATGTTC	ATAAACTAGA	20880
GGGGGAATTT	GTATCCTACT	ATCGTTTAAC	GCACTTCTGC	ATTGACTTTT	TCTTCGAGAG	20940
ACGCTTGGAAT	TTTTTCCATA	TAGCGTGCGA	CTTCTTCGTC	CGTTAAGCTG	TCTTCTGGAT	21000
TTTGGAAGGT	CAAGCTATAA	GCCATTGACT	TCATACCAAG	TCCCAGTTTT	TCACCTGAGA	21060
AGACGTCAAA	GAGTTTGATA	TCTGTCAAAC	GTTTCACGCC	GGCAGCTTGG	ATAGCATCTA	21120
CAACTTCTTG	GTGAGTCACT	TCTGCCTTGA	GGAGAAGGGC	AACGTACACG	CTGACTGCTG	21180
GGAATTTGGT	GATTTCCACA	AATGGAACAG	CAGGTTGGAG	CGCCCCTTCG	ATGGCTGAAA	21240
GGTTAAGCTC	AGCTACATAC	GTTTCTGGAA	TATCGTAAGC	CTTGGCAGTG	ACTGGATGCA	21300
CTTGGCCAAG	GAAACCAAGA	ACTTGGTCAC	CGAGTGAAAT	CACGGCTGTA	CGACCTGGAT	21360

952

GAAGGCTAAC GATTTCAGAT GTTGCTGTAT AGGTTACTTG GAGTCCCAA CGAGTAAATA	21420
GGGCTTCAAG GATTCCCTTA GCATAGAAGA AATCAACTGG AACTGCTGCT GTTGGAAAT	21480
CTTTTTCAGC AACCAAGCCT GTCAAGGCAA AGGCAAAGCT GTTGATCTCA TTTGGAAGTT	21540
CTTCTTTTGG ATTACCTGTT TGTTCAAAGA CTTTTCCTAAT CTCATAAAGG GCCAAGTTT	21600
TATTCTTACG AGCCACGTTG TAGGCAACGG TATCAAGGAT CCCTGAAATC ATATTTTGAC	21660
GGAGGACTGA ACGATCCACA GTCATTGGCC ACATGAGTTC AGTAAGGTTA CTTGGTTGAG	21720
CTGTGAACTC AACTGCTTTT TCAGGAGTTG TCAGAGCATA GGTGATGATT TCTGTCAAAC	21780
CTGCTCCTTC AGCAATGGTA CGAACTTGAC GCGGAGTTT TTGTATCACA GTCAATTAC	21840
CAGCTGTACC ATCGTCTTTT GGAAGGCTGG TTGGCAAGCG GTCATATCCA TAGATACGAG	21900
CGATTTCTTC AAAGAGATCA GCTTCGATTG TGATATCCCA ACGACGACGT GGTACGCTGA	21960
CTGTAAAGCT GTCTGCATTT CCAGAAAGAC CAAAGCCAAG ACGACGGAAG ACGTCTTCTA	22020
CATCAGCATA AGACAGCTCA GTTCCGAGGA CACGGTTAAC ATCAGCAAGG GTTGAAGAAA	22080
CTTCCACATC AGAGGTATCA AGCTCACCCG CTGAAACGAT ACCCTTACGC ACCGTCGCGC	22140
CTGCAAGCTC TGCAATCATG CTAGCTGCCG CATCAAGGGC TTCATTAACT GTTGCCACAT	22200
TAATTCCTTT TTCAAAGCGA GAAGATGACT CAGAACGAAG GTTCAGGCGA CCACTTGCTCT	22260
TACGGATAGA TTTGCCATTA AAAACAGCAG CTTCAAGGAT AACACGACTA GATTTTTCAG	22320
AAATTTCTGT AGCCTGACCA CCCATAACAC CGGCAAGGGC TACTGGTTTG TCAGCAACTG	22380
TAATCACGAG GTCTGTCTCA GCCAAGTCTC GTTCTTCACC GTCCAGGGTC ACTAATTTT	22440
CACCATCAGC CGCTTCACGC ACACGGATGT CAGTCCCTTC AAATGTGTCC AAGTCAAAAG	22500
CATGCATAGG TTGACCAAAG TAGAGCAGGA TGTAGTTTGT CACGTCTACA ACGTTATGA	22560
TGGGACGGAT GCCTTCGTTT ATGAGAAGGT TTTGCAACCA TTGTGGACTT GTGCGATAG	22620
TCACATTGTC CAAGATACGA GCTGCATAGT AAGGCGCCTT GTCTGTCTCA ATGCTGACAG	22680
AAAGGGCATC TGCCGCAGCT TCATTAGTTT CTGTTAGAGT AAATTTTTTA AAGTTGACTG	22740
CCTTGTCATA GATGGCTGCC ACTTCGTGAG CCACTCCACA CATAGAAAGG GCATCTGCAC	22800
GGTTTGGTGT GATGGAAAGT TCGATGATTT CATCATCCAA GTCTAGGTAA GAAAAGACTT	22860
CCTCACCTGG CACGGCATCT TCAGGCAAGA TTTGGATGCC ATCTGCGAAT TCCTTAGGCA	22920
CAACTGAGTC AGAAATCCC AATTCACCAA GTGAACAGAT CATTCCAAGT GACTCCAAAC	22980
CACGGATTTT TCCTTTTTTG ATTTTGTAGT TATCAGCGAT ACGAGCTCCT GGAAGAGCCA	23040
CCATGACCTT GATCCCAGCA CGCACATTTG GGGCACCACA AACGATCTGA CGCTCTTCTT	23100
CTTCGCCAAC GTTAATCTGA CAAACATGGA GGTGAGTCTC TGGCACATCT TCGCAAGACA	23160

953

AGACCTCACC GACGACAATT TTTGAGAGAC CAGCAGCTGG TGATTCCACA CCCTCTACCT	23220
CGATCCCTGT AGTTGACATT TTTTCAGCCA ACTCTTGTA TGGCACATCA ATGTCCACCA	23280
ATTCTTTTAA CCATTTATAA GATACAAGCA TAATTTAGTT CTCCAGAATG ACAGTTGTCA	23340
CTCTAGTTCT TTTCCCTTCC TATCATTTCA ATAGAAGAAT CCTCTCTTA CCTTAATTTC	23400
TTTCTCAGTA ACCAATCCGT ATCTACTTTT TGACCAACCA TAAATGATG TTGGCTAAAT	23460
TTTTCAAAAC CATATCGGTT ATAAAACGCT TGAGCTTTTG TATTATGCTC CCAAACACCT	23520
AGCCAAGCCC AAGAAAACT ATTTTTTGTA GCAAGTTCAA GTGCGAATTC AAACAGTTGC	23580
TTACCTAGTC CAAATCCTTG GAATTTTGT AGCACATAGA GACGTTGAAT TTCAAAGCG	23640
TCCTCTAAT CTCTCTCAGT TTGAGCACTT CCCCAGTTGA CTTTGAGAAA ACCAGCTATC	23700
TCCTCCTCAT GCATAATGAA ATAGGTTTCA GAGTCAGGAT TTCCCAACTC AGTTGACAAA	23760
GTTTTCAGAC TATAAGCCTC TTCAAAGTAT TCCTGTAAC TCTCTCCGT ATTATCATAC	23820
GCAAAGGTTT CACGAAAGGT TTGTTTGGCA ATTTTAGCCA ACACCTCAAC ATCTGCCATT	23880
TCTACTTTTC TAATCATTAT TTAAACTGTT CTGAGAAGCG GACATCTCCT TGGTAGAATC	23940
CACGGATATC GTTGATTCCA TAACGGAGCA TAGCTACACG CTCTTGTTCCA AGACCAAAGG	24000
CAAAGCCAGA GTATACAGTC GCATCGATAC CACTCATTTT AAGGACACGT GGGTGAACCA	24060
TACCGGCCCC CATAATTTG ATCCAACCTG TTTTCTTACA TACATTACAG CCTTCTCCAC	24120
CACACTTGAA GCAAGAAACA TCCACCTCAA CAGATGGCTC TGTGAATGGG AAGTAAGATG	24180
GACGCAAACG AATTTGACGC TCTTCACCAA ACATTTTTTG GACAATCAAC TGAAGCGTTC	24240
CTTGAAGATC AGCCATAGAG ATATTTTCC CAACTACCAA GCCTTCGATT TGGTGGAATT	24300
GGTGACTGTG GGTGCGATCG TCCGTATCGC GACGGAAGAC ACGCCCTGGC GAGATCATCT	24360
TCAAAGGACC TTTAGAAAAA TCATGGGCAT CCATAGCACG CGCCTGAACT GGAGACGTGT	24420
GGGTACGGAG CAAGATTCT TCAGTGATAT AGAAAGTATC CTGCATATCA CGAGCTGGGT	24480
GGTCTTTTGG AAGGTTTATA CGTTCAAAGT TATAGTAGTC TTGCTCCACT TCAAAACCAT	24540
CCACGACTTG ATAACCCATA CCGATGAAGA TATCTTCGAT TTCTTCACTG GTTGTGTCA	24600
AAACGTGACG GTGACCAGTC GCAACTGGAC GACCTGGAAG CGTCACATCT ATACTCTCGC	24660
TAGCCAGTTG AGCCGCCACT TTCTTTTCTT CCAAGAGCTT AGCTGTTTCT TCAAAAGCAG	24720
CAGTCAAGAC ATCAGAGCT TCATTGACGT GTTTCCTGAT GATTGGACGC ATCTCAGCAG	24780
AAACATCTTT CATCCCTTTG AGGATTTCAG TGAGCGAACC CTTTTTACCA AGGACAGAGA	24840
CACGAAATC TTGCATCTCT TTTTCATTTT CAGCAGTAAT CTGCTTCAAG CTAGCCAGCG	24900

954

TTTCTTCGCG AAGCGCTTTT AATTGTTCTT CAATAGTTGA CATATTTCCCT CCATCAGTCT	24960
CTCGTAGATA AAAAGAAAAC CACATGCCAA AACTCCACT CGGAGCGTTG ACACGCGGTA	25020
CCATCCGTTT TCATCTGACA AGTCAGACCT TCATTCTTAA ATCCATGCGC AAGTGAATTC	25080
ACCCAGCTTT CATATAGAGA GCTTGCAGTC ACGGCTCTCC TCCCTGATAT ACTTCCCTTG	25140
GGCTACTAGT CTTTCAGATT CCTATTCAAT TACTACTTAG TTTATCAGAT TTTTACCATT	25200
CTTGCAAGAC CTATCTTACT TCTGCTTGTT AGCTTATTCT TATCTAAATT TATATAAACc	25260
TTATCTAAAT TAACTATTTA TAATTTTGT AACAAATTA AATTAATTGA CACTCCCTTA	25320
TAAATAAAG AAGTTTAGAA TTTAATGTCT TCCAACTTC TTTATCCAT ATTTAATGAA	25380
ATGCCACCTT AACCGTGATA ATAGCTAGTC ATCAATAAAA AACTATTGA ATAAGGATTC	25440
TCCATTTGAT TCAATCACTT CTTTATACCA AGTAAAAGAC ATTTTCTTAT ATCGATTTAA	25500
TGTACCACTT CCATCATCGT TTCGATCAAC ATAAATGAGA CCGTACCTTT TAGAAAGTTG	25560
TGCAGTGGAC ATAGAAACAC AGTCAATACA TCCCAAGAC GTATAGCCCA TAATTTCAAC	25620
ACCATCCTGT AGAGCTTCAG CAACTTGCAA TAAATGTCTT TTCATATACT GAATTCATA	25680
ATCATCTTGG ACGGTTAAGT TATTAAGTTC ATCTTTTATT AGTTGATCTT TAGCACCTAA	25740
TCCATTTTCT ACTATAAATA ATGGGATTG ATAACGGTCA TAATATCTAT TTAAATTAT	25800
ACGTAGTCCA ATTGGATCAA TTTGCCATCC CCACTCTGAA GACTCTAAAT AAGGATTTAC	25860
TAAACCACCA ATAATATTCC CTTCTCCTGA ATTATACTGT GTTGAAGAG CAGATTGAGT	25920
CACACTCATG TAATAGCTAA AGGATAAAAA ATCTACGGTA TAATTTTTTA ATAACCTGCT	25980
ATCTTCAGCT GCAAACTCTA TGTTAATGTC ATTTTCCTTA AAATATCTTT TTGCATAATT	26040
CGGATAATAA CCTCTAACAT GCACATCTGA AAATAGATAA TTTAGATTCT CATACTCATG	26100
AGTCGCCCCAT ACATCTTTTG GATTTGGAGT CATTTGGATAA GCTGGCATAG CTAATACCAT	26160
ACATCCCACC TTAAACTCTG AATTAATCTC ACGAGCAATT TTTGTAACCA AACTTGAGGC	26220
GACTAATTCA TGATGTATAG CTTGATATAA TTCTTGTTTC GAAAGATTCT CTTAGGTAT	26280
ATCTATTCCCT CCACTAGTAA ATGGTAATTC CAAAACAGAG TTTACTTCGT TAAATGTAAG	26340
CCAATATTTA ACTTTATCTT TATACCTTTC TAAAACGTGT CGAGCAAATT TTTCATAAAA	26400
ATGAATCATT CTCCTATCAA CCCATCCATG ATATTTTCTT GCTAAATATA ATGGAGTCTC	26460
ATAGTGTAAG AGAGTTACAA GTGGTTCTAT CCCGTGAGCA TGTAAGTTCAT CAAACAATTC	26520
ATCATAATAT TTCAACCCAG CTTCGTTAGG TTCTTCCTCA TCTCCTTTTG GAAAAATTCT	26580
ACTCCATGCA ATAGAAGTAC GAAAAACATT AAAGCCCATT TCAGAAAACA AGGATATATC	26640
TTCTTATAT TATATGATAA AATCAATACC TATCAATTTT AAGTTATCTT CTGTAGGATT	26700

955

TTCTGTTGCT TCTCCTAATC CACCTTTGGG TAACACATCC TGAAC TGATA AGCCCTTACC	26760
ATCTTCATTA TATGCTCCCT CTACTTGATT AGCTGCAACA GCTCCACCCC AAAGAAAATC	26820
ATCTGGAAAA ATGGTCATAA CTTTCCTCCA TTATAATATT ACCAGTAATT CCTTAGAATG	26880
CTCGATTGTC TGATTATTAG GTAATACTAA TACATCTAGA AAATCATGG TATTCGTTAC	26940
AATTACTGGT GTAACGTGTTT CGTAGCCTTT AGTCTTGATT AAATCAAGT CCATTTCAAA	27000
AATCAACTGA TTTTGGAAAA CTCTGTCTCC TTCTTCTACA TGAATAATA AACCTTGACC	27060
TTTTAGCTCA ACAGTATCTA ATCCAATATG AATTAGTAAC TCAACACCCCT CATCACTCTT	27120
CAATCCAATT GCGTGCTTAG TCGGAAAAAT ATTTGTAATT TTTCCATCAA ATGGTGCATA	27180
AACCTTACCT TCACTTGGGA TAATCGCTAC TCCGTCTCCA ATTAGTTTAT CTGAAAATGT	27240
TTTATCCTGG ACATCGCTTA ACGGAATGAT TTCTCCTGAT ATAGGAGAAA ATATCATTTT	27300
TTTATTTGAA ACTCCAGCTT CAACTTCTAA ATTGCTAGAA CTCTCTTCTT CATCGATTCC	27360
AAATATATAA GCTAATACAA AGGTAATAAC AACCGAAATG ACCCCACAA TTAAAGCATT	27420
TACAATATTT GATGGCACAT CAGAATAAAT AAATTGAGGC AACGCTATCA AAGATGGGAC	27480
AGCAAATAGA TATGCTTTAA CACTAGTAAG ACCTGCAAAT AATCCCGCTA ATCCACCACC	27540
AATCATAGCT GCATAAAGCG GTTTTTTATA TTTTAAAGTC ACACCATATA ATGCAGGTTT	27600
GGTAATCCCT GCAAGTAAGG CTGAGAAACC TGCTGCAAAA GCAATTGTT TTGTATTATT	27660
ATTTTTACTC TTTAATGCAA CAGCCATCGA AGCAGCCCTT TGAGCTAAGT TTGACCCTAA	27720
CATTGCTGGA AGAATTAATA CGTCTGGAGT AGCAATAGAT GCCGCCAAAA AAATAGGTGC	27780
AAAAGCCCAA TGCAATCCAG TCATAACAAT AAATGGCATA ATAGCACCAA GAATAGCTAA	27840
TGTAAGCCAT CCAGCTACAC CATACATTTG CCCAACTAGA TTTGATAATC CTTCACCAAC	27900
AATTACTCCA ATAGGTCCGA CTACAATAA GGCAATACAG CTTGATACTA ATAATACTAG	27960
CGTAGGTTGC AAAAACTCT TAGTAATAGC TAGTGTTAAT TTAGCAATTA TTTTTCAT	28020
ATATTTTCATC AACCAAACCA TAATAAGAAT TGGAACGACT GATGAACCAT AACTAGCTGG	28080
TGTCACAGGT GCACCAAATA AACTAAGAGG ATTCCTTGAT TGCACCATTT GAACAAAATT	28140
TGGATGGAGA AGTACACCTG CTACAGACAT AGCTAATGTA GATGTACTT TTAATTTTGG	28200
TGATGCAGAA TAAGCTAATA ACAGCGGTAA GAAATAATAT GGAGCATCCC CAAAAATGT	28260
CAAAAAAGCA ATAGTCTGAG AATCTGATTG CAATATACCA AGCATTGGTA AAATGATTAC	28320
CAAGACTTTC AACATACCTC CCCCTAACAT TGCTGGAATG ATTGGAGTCA TGAACACAGC	28380
GATATACTCA ATGATTCTTT CTAAAATATT CCCTTGTGTC CCTTGAACAA CTGAATCGGA	28440

956

TTCAAAATTG CCAAGTTTAA CGAATTCTTT ATAATAATTA GCTACATCAT TACCAAGTAT	28500
AATTTGATAT TGTCCATTCT TTTTCATAAT ACCTATTACA CCTGGTATCT TCTTCACATC	28560
AATCATATTG ACTAAATTTT CATCTTTTAA TTCTAATCTT AAACGTGTTA CACAATGGGT	28620
AACTCTATTG ACATTTTTTT CACCTCCAAT TACATCGAGG ATTTTTTGTA CCGTATCTTT	28680
ATAACTCATG GTATTCTCCT ATTCTATTAA TCTAAATTTT TTGTTAAGCG ACGAATATGA	28740
GCCATCAAAAT AAACTAATTC ACTAGAAGTC AGCAAATAAT TGTACTCCGT TTGTATAAAC	28800
ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATATT TATTTTTCAT TAATGCTAAC	28860
AAGTCTTCAT CATCATCGTC GG	28882

(2) INFORMATION FOR SEQ ID NO: 141:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12835 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

GCCTATGTCT TTTTCAAAAA AATGCTTGAC TTGAGACGGG AACTAGGGAA GTCTAAAGGC	60
GGAAGGCATT GATTTATACT CTTGAAAAT CTCTTCAAAC CACGTCAACG TCGCCTTGGA	120
TTATATATGT AACTGACTTC GTCGATGCTT ATCTACAACC TCAAAGCAGT GCTTTGAGCA	180
ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATTATA TTACTTTCTA	240
TTTGTAGGAG GTGGCTTATG AAGATTCCTC TCTTAACTTT TGCAAGGCAT AAATTTGTTT	300
ATGCTCTGCT TACTTTGCTT TTTCTTGCTT TGGTTTATCG TGATGTTTIG ATGACTTATT	360
TCTTTTTTGA TATTCATGCG CCCGATCTAG CTAAATTCGA TGGACAAGCA ATTAAAAATG	420
ACTTATTAAA ATCAGCATTG GATTTTCGTA TTCTCCAGTT CAATCTAGGT TTTTATCAAT	480
CATTTATTAT TCCAATCATC ATTGTTTTGC TAGGTTTTCA ATATATTGAG CTGAAAAATA	540
AAGTTTTACG ATTGAGTATT GGAAGAGAAG TGAGTTATCA AGGGTTAAAA AGAAAGTTGA	600
CTTTGCAAGT TGCAAGTATC CCTTGTTTGA TATATTTAGT GACTGTGCTG ATAATGCAA	660
TTATAACCTA TTTCTTTGGG ACTTTTTCTC CTCTTGGATG GAATTCCTTA TTTTCTGATG	720
GAAGTGGTTT ACAAAGACTC CTAGATGGAG AGATAAAAAG CTATTTGTTT TTTACTTGTC	780
TCCTACTAAT CGGTATTTTC ATCAATGCAA TCTATTTTTT ACAAATAGTT GATTATGTGG	840
GGAATGTGAC TCGTTCGGCA ATCACCTATT TGATGTTTCT TTGGCTTGGT TCTATGCTGC	900
TTTATAGTGC CTGCGCTTAC TATATGGTTC CTATGACGAG TTTGATGCAA GCTAGCTATG	960

957

GGGATGTAAG TTTGATGAAA CTCTTTACTC CTTATATCCT TTATATTGTC CCTTACATGG	1020
TGCTTGAAAA ATATGAAGAT AATGTTTAAG AATTTTAACA ATATTTTGCT AAATAGAAAG	1080
ATTGTTTTAC TACTTCGTAT AGTTCTGATG ATGATTTTGA TAAACCATCT ATTGTCAACA	1140
GCGGTTCAAA AGCAGGATGC TGTATCTTT TTCAAGAGAG AATTGATTTC AATTTTTTCC	1200
TATAATGACT ATTCTGAAGC GAATTTAGAA ATCCCCAAAC TATTGTTAAA CCTTTCGCTT	1260
TTCATGGTAG GATGGCTCTC TGTCATTTTA CTTGAAAGTG ATTTGGCAGA CCATTACCAT	1320
CACTTGATTG GCTATCAATC AAGCTCCTTT TTCGATTATA CAAGGAAACG ATTGGTTGTC	1380
ATTTCTAAAT TTTTACTCA AGATTTGTTT GTCTGGTTTC TTGGTTTACT TCCTCTAGGA	1440
ATTCATTTCA AAACAGTCGC ACTTTTCTTT TACTTGCTC AGTTAATGAT GTGTACTTA	1500
CTACTGTCTT ATCTGATAGC ACTGATTAGT GCGGGCGCTG GTTTTTCCTT TTTTCTCTAT	1560
TTTTTAGCAT TTGTGGGACA AGAATGGATG ATGGATCATA TTGTAACAGT GTATTTAGTA	1620
CTCTTAAGTT TATTAGTTAT GTTGATTGTT AGTCGCTTGG AAGAGAAATT TAAGAAAGGA	1680
TAAACGATGA GACTTGAAAT TATAAATGGA CAGAAAATTT ATGGGAAAAG ACCTATTTTA	1740
AATCAGTTGA ATTTGGTGTT TCAATCAGGA AAAATTTATG GACTTAAAGG TGATAATGGA	1800
TCTGGCAAGA CGGTTCTTTT AAAGATACTT GCTGGTTATA TTAAGCTTGA CAAAGGAAAA	1860
GTTCITCAAG ATGGTAAAGT TTACGGGGTA AAAAATCATT ATATTCAGGA TGCAGGAATT	1920
TTAATTGAAA AAGTCGAGTT TTTATCTCAT TTATCCCTGA GAGAAAATTT GGAAGTTTA	1980
AGGTATTTTT CATCTAAAGT TACGGAAAAA AGAATGCCTT ATTGGATTCA ATACTATGAT	2040
TTACAGGAAT TTGAAGACAT TGAATACCGT CATTTATCCT TAGGAACAAA GCAAAAAATG	2100
GCCTTGATTC AAGCCTTTAT TTCCTCTCCT TCTATACTCT TTCTCGATGA ACCTATGAAT	2160
GCTTTGGATG AGAAGAGTGT GAGGTTAACC AAACAGGTCA TTTTATCTTA CCTGAAAAAA	2220
GAAAAATGTC TGGTTATCCT GACGTCGCAC ATATCGGAAG ATATTTTCAGA CCTTTGTACA	2280
GATGTATTAG TTGTCGAAAA TGGACATATA CAAATGTAAA GGATATACAA TCCTAGGAGA	2340
TGGCTTATGG CACATCTAAA ATCATTATT ACACGATATT CCAAGGTTTA TATTGGTTTA	2400
GTTCGTGCTA TCTGGCTGTC TTCTTCTTT ATCCCTTGGG ATAAACCACT TCTGGGGATA	2460
AGGATTGACA TCTTCATCAT ACAGAAAATC TTGCTAGCTT TTGGAATTCT GTCCATTCTC	2520
ATGGCCTTGC TGTCCAAGAA AGTCAGTCTC TTTGTTTTTG GACTGATTG CTGTCCTTCT	2580
CTTTGGATTA ACTTATTTAT CACATTTGCC ATTTTGCCGA TTTTGGCAA TTAAACAGTC	2640
ATAAAAGTCG GAGAGGTTAG CTGAAAACT AACCTCTTT TCCTTTTCAA AATGGGGATT	2700

958

CTTCCTTGAA AATAATCAGT AATTGTGCTA AAATTAAAGG AACATTCTAA AATATTCGGA	2760
ATTTAAAGTA AGGAAAAACA TGGCTAATAT TTTAAAAACA ATTATCGAAA ATGATAAAGG	2820
AGAAATCCGT CGTCTGGAAA AGATGGCTGA CAAGGTTTTC AAATACGAAG ACCAAATGGC	2880
TGCTTTGACT GACGACCAAC TAAAAGCAAA AACAGTTGAA TTTAAGGAAC GTTATCAAAA	2940
TGCAGAAATCA CTGGATTCAT TGCTTTACGA AGCATTTCGC GTTGTCCGTG AAGGTGCCAA	3000
ACGTGTCCTA GGTCTCTTCC CTTATAAGGT TCAGGTCATG GGGGGGATTG TTCTTCACCA	3060
TGGTGACGTG CCAGAGATGC GTACAGGGGA AGGGAACC TTGACTGCGA CCATGCCGGT	3120
ATACCTCAAT GCCCTTTCAG GTAAAGGGGT TCACGTAGTT ACGGTTAATG AATACCTGTC	3180
AGAACGTGAC GCGACTGAGA TGGGTGAATT GTACTCTTGG CTGCGTTTGT CAGTAGGGAT	3240
TAACCTGGCT ACCAAATCTC CAATGGAGAA AAAAGAAGCC TATGAGTGTG ATATTACTTA	3300
CTCAACTAAC TCAGAAATCG GATTTGACTA CCTTCGTGAC AACATGGTCG TTCGCGCCGA	3360
AAACATGGTA CAACGTCCGC TTAACATGCG CTGCGTCGAT GAGGTTGACT CTATCTTGAT	3420
TGACGAGGCT CGTACACCTT TGATTGTATC AGGTGCCAAT GCGGTTGAAA CCAGTCAGTT	3480
GTATCACATG GCAGACCACT ATGTAAAATC TTTGAACAAA GATGACTACA TCATCGATGT	3540
GCAGTCTAAG ACTATTGGTT TGTCTGATC AGGGATTGAC AGGGCTGAAA GCTACTTCAA	3600
ACTTGAAAAC CTCTATGACA TCGAAAACGT GGCTTTGACT CACTTTATCG ATAACGCCCT	3660
TCGTGCCAAC TACATCATGC TTCTCGATAT TGAATATGTG GTGAGCGAAG AGCAAGAAAT	3720
CTTGATTGTC GACCAATTTA CAGGTCGTAC CATGGAAGGT CGTCGTTATT CTGATGGATT	3780
GCACCAAGCT ATTGAAGCCA AAGAAGGTGT GCCAATCCAG GATGAAACCA AGACATCTGC	3840
CTCAATCAGC TACCAAAACC TCTTCCGTAT GTACAAGAAA TTGTCTGGTA TGACGGGTAC	3900
AGGTAAGACT GAGGAAGAAG AATCCCGTGA AATCTACAAC ATTCTGTGTA TTCCAATCCC	3960
AACAAACCGT CCTGTTCAAC GTATTGACCA CTCAGACCTT CTTTATGCAA GTATCGAATC	4020
TAAGTTTAAA GCGGTTGTCG AAGACGTTAA GGCTCGTTAC CAAAAGGGTC AACCTGTCTT	4080
GGTTGGTACA GTAGCGGTTG AAAGTAGTGA CTACATTTCT AAGAAATTGG TTGCAGCTGG	4140
TGTTCTCAC GAAGTCTTGA ATGCCAAAA CCACTATAGA GAAGCCCAA TCATCATGAA	4200
TGCTGGTCAA CGTGGTGCCG TTACCATCGC AACCAACATG GCGGGTCGTG GTACCGACAT	4260
CAAGCTTGGT GAAGGTGTTT GTGAACCTGG AGGACTTTGT GTTATTGGTA CAGAACGTCA	4320
TGAAAGTCGT CGTATCGATA ACCAGCTTCG TGGACGTTCA GGTCGTCAAG GAGATCCAGG	4380
TGAGTCACAA TTCTACCTAT CTCTGAAGA TGATTGATG AAACGTTTTG GTTCTGAACG	4440
CTTGAAGGGA ATCTTTGAAC GCTTGAACAT GTCTGAAGAG GCCATTGAGT CTCGCATGTT	4500

GACGCGTCAG GTTGAAGCAG CTCAGAAACG TGTGGAAGGA AATAACTACG ATACCCGTAA	4560
ACAAGTCCTT CAATACCATG ATGTCATGCG TGAACAACGT GAGATTATCT ATGCTCAACG	4620
TTACGATGTC ATCACTGCAG ATCGTGACTT GGCACCTGAA ATTCAGTCTA TGATCAAACG	4680
CACGATGAA CGTGTCGTG ATGGTCATGC GCGTGCCAAA CAAGATGAAA AACTAGAGGC	4740
AATTTTGAAC TTTGCTAAGT ACAACTTGCT TCCTGAAGAT TCTATTACGA TGGAAAGACTT	4800
GTCAGGCTTG TCTGATAAGG CCATCAAGGA AGAGCTTTTC CAACGTTCC TGAAGGTTTA	4860
CGATAGTCAG GTTTCAAAAC TACGCGATGA AGAAGCAGTT AAAGAATTCC AAAAAGTTTT	4920
GATTCTACGA GTGGTGGATA ACAAGTGAC AGATCATATC GATGCCCTTG ATCAATTGCG	4980
TAACGCGGTT GGACTTCGTG GCTATGCTCA GAACAACCCT GTTGTGAGT ATCAGGCAGA	5040
AGGTTTCCGT ATGTTTAATG ATATGATTGG TTCGATTGAG TTTGATGTGA CACGCTTGAT	5100
GATGAAAGCA CAAATTCATG AACAAGAAAG ACCACAGGCA GAACGTCATA TCAGTACAAC	5160
AGCGACTCGC AATATCGCTG CTCACCAAGC AAGTATGCCA GAAGATTGG ATTTGAGCCA	5220
GATTGGACGC AATGAACTTT GCCCATGTGG TTCTGGTAAG AAATTTAAAA ACTGTCACGG	5280
TAAAAGACAA TAAAATGAGA TAGTTTAGAG GCGGATATCT TGTGAAAAGT AAATTTTAC	5340
TGGGTATCCG TTTGCTTTAT AAGGAGATGA GTTATGGTAT TTACAGCAA AAGCTCTAAA	5400
ATAAATATAG AAGAAGTTCG TGCCTTGTC AATTTAGAAG GTCAGGCTTT GGAGAGGAAA	5460
TCACAGCGAG ATCAAGAGCT AGAAGCCATT ATACGTGGAG AAGACCAGCG AATTCTCTTG	5520
GTAATCGGGC CATGCTCATC TGACAACGAA GAAGCTGTCC TTGAATACGC TAAGCGTTTG	5580
GCAGTCCTAC AAGAAGAAGT GGCAGATCGT ATCTTTATGG TTATGCGTGT TTATACTGCC	5640
AAACCCCGTA CCAACGGAGA TGGCTATAAG GGCTTGATTC ACCAGCCTAA CGCGACAGAA	5700
GCGCCTAGTC TTATCAATGG AATCAAAGCC GTTCGCCATC TTCACTATCG TGTCATCACA	5760
GAAACAGGGA TGACAACTGC TGATGAAATG CTTTATCCTG AAAACCTCC GCTTGATACAT	5820
GATTTGATTT CTTACATGGC AGTTGGTGCC CGTTCAGTTG AAGACCAGCA ACACCGCTTT	5880
GTGGCAAGTG GGGCAGGATT TTCTACTGGT TTTAAAAATC CAACCTCTGG AAATCTCAAT	5940
GTCATGTTTA ATGGGATTTA TGCTGCTCAA AACAAACAAA GTTTCCTTTT CTTAGGAAAA	6000
GAAGTAGAAA CAACTGGGAA CCCGCTTTCA CACGCTATTC TTCGTGGTGC TCTTAATGAG	6060
TATGAAAAA ATATTCCCAA CTACTATTAT GACAATTTAA TTGATACCAT TGCCCAGTAT	6120
GAGAAAATGG GCTTGAAAA TCCTTTTATC ATCATTGATA CCAATCATGA CAATTCTGGT	6180
AAGCAGTATA TTGAACAGAT CCGAATTGTC CGCCAGACCT TGATTAACCG TGCTTGGAAAT	6240

960

GAAAAAATTA AGCAGTTCGT TCGTGGTTTT ATGATTGAGT CTTATCTGGA AGATGGTCTGA	6300
CAAAATGAGC CAGAAGTATT TGGTAAGTCT ATCACAGACC CTTGCCCTGGG TTGGGATAAC	6360
ACAGAAGCTC TTGTCAGAGA AATTACAAA ACGTTAGGAG AATAAGATGG CATTATTTGA	6420
AAAAGGTCAA GAAATCGATA TGGAAGTCAT CAAGGCTGAA ACCCAATTGT CTGCCGAAGC	6480
CTTGAGACTC AAGGAAAGCC GTGACAGGGA ATTGGCAGAT ATTATTTTCA GGGAAAGATGA	6540
CCGTATTCTC TTGGTGATTG GTCCTTGCTC TTCTGATAAT GAAGAGGCGG TCTTGGGAATA	6600
TGCTCGCCGT TTATCTGCCT TGCAAAAGAA GGTAGCGGAT AAGATTTTCA TGGTCATGCG	6660
CGTGTATACT GCTAAGCCTC GTACCAATGG AGACGGCTAT AAAGGATTAG TTCACCAGCC	6720
AGATACTTCT AAGGCTCCAA GCCTGATTAA TGGCTTGCGG GCTGTCCGCC AGTTGCACTA	6780
CCGCGTGATT ACAGAGACTG GTTTGACAAC GGCAGATGAG ATGCTTTATC CGTCAAATCT	6840
GATCTTGGTG GATGACTTGG TCAGCTACCA TGCCGTTGGA GCTCGTTCTG TGAAGACCA	6900
AGAGCACC GC TTTGTGGCTT CTGGGATTGA TGCACCAGTA GGGATGAAAA ATCCAACCTC	6960
AGGAAATTTG GGTGTTATGT TTAACGCCAT CTATGCTGCT CAAAACAAGC AAACCTTCCT	7020
TTATCATGGG CAGGAAGTTG AGACATCAGG TAATCCTTTG GCCCATGTTA TCCTCCGTGG	7080
AGCAGTCAAC GAGTATGGCA ATTATATGCC GAATTACTAC TATGAAAATC TACTCCAAGC	7140
CATTGAACGC TATGAAACCA TGGGACTTGA AAATCCTTTT ATCCTCATTG ACACCAACCA	7200
TGATAACTCA GGCAAGCAAT ATATGGAGCA GATTCGAATT GTTCGCCAGA CCTTGCAGAA	7260
TCGTGATTGG AATGAGAAAA TTAAAAAGAC GGTTCGAGGA TTTATGATTG AATCTTACCT	7320
AGCAGATGGT CGTCAAAC AACCAGAGAT CTTTGGTTGC TCTATTACTG ACCCTTGCCT	7380
AGGTTGGGAA AATACAGAGG CCTTGGTAGA AGAGATTTAT GTTACCTTGA CAAAATAAGT	7440
GAAAAGGATG GAGTTGGGGA ATCTCAACTC CTTTGTGATGA GAATGATAGT TGGACACGGA	7500
ATTGACATCG AAGAATTGGC TTCGATAGAA AGCGCACTTA CACGACATGA AGGATTTGCT	7560
AAGCGTGAC TGACCGCTCA GGAAATGGAG CGCTTCACCA GTCTCAAAGG ACGCAGGCAG	7620
ATAGAAATATT TAGCTGGTCG CTGGTCGGCT AAGGAGGCCT TTTCCAAGGC TATGGGAACG	7680
GGCATTAGCA AGCTCGGTTT TCAGGATTTG GAAGTCTTGA ACAATGAACG TGGGGCGCCT	7740
TATTTTAGTC AGGCACCATT TTCAGGAAAG ATTTGGCTGT CTATCAGCCA CACCGATCAG	7800
TTTGTGACAG CCAGTGTCAT TTTGGAGGAA AATCATGAAA GCTAGTCCAC ATAGACCAAC	7860
CAAGGCTCTG ATTCATCTGG GAGCTATTTCG ACAAATATT CAGCAAATGG GGGCTCATAT	7920
CCCTCAAGGA ACGCTCAAGT TGGCTGTGGT TAAGGCCAAT GCTTATGGTC ATGGAGCTCT	7980
TGCCGTTGCC AAGGCAATTC AAGATGATGT TGATGGCTTT TGCGTTTCCA ATATCGATGA	8040

961

AGCCATTGAA CTCAGACAAG CTGGACTCAG CAAGCCAATC CTCATTTTAG GAGTTTCTGA	8100
AATCGAAGCT GTTGCTCTAG CTAAAGAATA TGACTTCACC TTGACAGTGG CTGGACTGGA	8160
GTGGATTCAA GCACTCTTAG ATAAGGAAGT GGACCTAACT GGATTGACAG TCCACCTCAA	8220
GATTGATTCA GGGATGGGAC GGATTGGTTT TAGAGAGGCA AGTGAGGTTG AGCAGGCTCA	8280
AGATTTGCTC CAACAACACG GTGTTTGTGT TGAAGGAATC TTTACCCACT TTGCTACTGC	8340
TGATGAGGAA TCAGATGACT ATTTTAATGC CCAGTTAGAA CGGTTTAAAA CTATTTTAGC	8400
TACTATGAAG GAAGTTCAG AGCTGGTTCA TGCTAGCAAT TCTGCAACGA CTCTTTGGCA	8460
TGTAGAGACT ATTTTCAATG CGGTTCGTAT GGGAGATGCC ATGTATGGCC TCAATCCAAG	8520
TGGAGCGGTC TTGGATTGTC CTTATGATT TATACCGGCC TTGACCTTGG AGTCTGCTCT	8580
GGTTTATGTC AAGACAGTTC CAGCTGGAGC TTGCATGGGC TATGGAGCAA CTTATCAAGC	8640
GGATAGCGAG CAAGTCATCG CGACCGTGCC AATCGGGTAT GCAGATGGAT GGACAAGAGA	8700
CATGCAAAAT TTCTCTGTCT TGGTAGATGG CCAAGCTTGC CCAATGTGCG GCAGGGTTTC	8760
GATGGACCAA ATCACTATTC GATTGCCTAA GCTTTATCCG CTAGGAACCA AGGTAACCTT	8820
GATTGGCTCC AATGGGGATA AGGAAATCAC TGCAACTCAG GTAGCGACCT ACCGCGTAAC	8880
CATTAAGTAT GAGGTGGTTT GCCTCCTCAG CGACCGTATT CCGAGAGAAT ATTATTAGAA	8940
AAGAAAGGAG TGGAGCATGA ATCTACATCA ACCCTTGCAT GTCTTGCCTG GTGTGGGACC	9000
AAAGTCAGCA GAAAAATACG CCAAACTAGG AATTGAAAAC TTGCAAGATC TCTTGCTCTA	9060
CTTTCCTTTC CGTTATGAAG ACTTCAAAAC CAAGCAGGTG CTGGAGCTGG AAGACGGTGA	9120
GAAGGCAGTT CTTTCTGGTC AGGTAGTGAC TCCTGCTAGT GTCCAGTATT ATGGTTTCAA	9180
GCGCAATCGC CTGCGTTTGA GTCTCAAGCA GGGAGAGGTC GTTTTTCGG TGAATTTCTT	9240
TAACCAGCCC TATCTGGCTG ATAAAATAGA GTTGGGAGCA ACCCTTGCTG TCTTTGGAAA	9300
ATGGGACCGC GCTAAGGCTA GTCTGACTGG GATGAAGGTT CTGGCTCAGG TAGAAGATGA	9360
CCTCCAGCCT GTCTATCGTC TGGCTCAGGG AATCAGTCAG GCCAGTCTGG TCAAGGTCAT	9420
CAAGACGGCT TTTGATCAGG GACTGGACCT CTTGATAGAA GAAATCTGC CCCAGTCTTT	9480
ACTAGACAAA TACAACTCA TGTCCCGTTG TCAGGCAGTC CGTGCTATGC ATTTTCCAAA	9540
GTATTTGGCA GAATACAAGC AGGCTCTTCG CCGTATAAAG TTTGAGGAAC TCTTTTATTT	9600
CCAAATGCAG CTGCAGATGC TCAAGTCTGA AAATAGAGTT CAGGGAAGTG GTCTGGTTCT	9660
GAATTGGTCT CAGGAAAAAG TGACAGCAGT TAAAGTAAGT CTTCTCTTTG CCCTGACCCA	9720
AGCTCAGGAA AAGAGTTTGC AGGAAATTTT AACTGATATG AAGTCCGACC ACCACATGAA	9780

962						
TCGTCCTCCTA	CAAGGGGATG	TGGGGAGTGG	AAAAACGGTA	GTCGCTGGCT	TGGCCATGTT	9840
TGCGGCAGTG	ACAGCAGGTT	ATCAGGCTGC	CCTAATGGTA	CCAACAGAAA	TCCTCGCAGA	9900
GCAACACTTT	GAGAGTTTAC	AGAACCTTTT	TCCCAATTTG	AAACTGGCTC	TCTTGACAGG	9960
TTCTTTGAAA	GCTGCAGAAA	AGAGAGAAGT	CTTGAGAGACC	ATTGCCAAGG	GTGAGGCTGA	10020
TTTGATTATA	GGAACCTCAC	CTCTGATACA	AGATGGGGTG	GAGTATGCTC	GTCTTGTTT	10080
GATTATTATC	GATGAGCAGC	ACCGTTTTGG	TGTAGGGCAA	AGGCGTATTT	TACGGGAAAA	10140
AGGTGACAA	CCAGATGTCC	TCATGATGAC	GGCGACTCCC	ATTCACCGGA	CGCTTGCCAT	10200
CACAGCCTTT	GGAGATATGG	ATGTTTCCAT	TATCGACCAG	ATGCCAGCAG	GTCGGAAGCC	10260
TATTGTGACG	CGCTGGATCA	AACATGAGCA	ACTACCTCAG	GTCTTGACTT	GGTTAGAGGG	10320
GGAAATTCAA	AAAGGTTCCC	AAGTCTATGT	CATCTCTCCT	TTGATTGAAG	AATCAGAAGC	10380
TCTAGATTTG	AAAAATGCCA	TTGCCTTATC	AGAGGAGTTG	ACGACTCATT	TTGCAGGCAA	10440
GGCAGAGGTG	GCTCTTCTAC	ATGGTAGGAT	GAAGAGTGAC	GAAAAAGACC	AGATCATGCA	10500
GGATTTCAAC	GAGAGAAAGA	CGGATATTCT	GGTTTCGACG	ACGGTTATTG	AGGTTGGGGT	10560
CAACGTTCCC	AATGCGACTG	TCATGATTAT	CATGGATGCC	GATCGCTTCG	GTCTCAGTCA	10620
ACTTCACCAG	CTTAGAGGTC	GTGTCGGTGC	GGGGGACAA	CAGTCTTACG	CTGTTCTCGT	10680
TGCTAATCCC	AAGACGGATT	CTGGGAAAGA	CCGCATGCGT	ATCATGACAG	AAACGACCAA	10740
TGGATTTGTC	CTTGCGGAGG	AAGATTTGAA	AATGCGTGGT	TCTGGTGAGA	TTTTTGGAAC	10800
CAGACAGTCA	GGACTTCCAG	AGTTCCAAGT	GGCTGATATT	ATCGAAGATT	TTCCGATTTT	10860
AGAAGAAGCA	AGAAAGGTTG	CTAGCTACAT	TAGTTCTATA	GAAGCTTGGC	AAGAAGATCC	10920
AGAGTGGCGC	ATGATTGCCC	TTCATCTGGA	AAAGAAAGAA	CATCTGGATT	AAGCTTTCTC	10980
TAAGGAAAAC	TTATACTCAA	TGAAAATCAA	AGAGCAAAC	AGGAAGCTAA	CCGCAGGTTG	11040
CTCAAAACAC	TGTTTTGAGG	TTGTGGATGA	AACTGACGAA	GTCAGCTCAA	AACACCGTTT	11100
TGAGGTGGCA	GATAGAACTG	ACGAAGTCAG	TAACATATAT	ATACGGTAAG	GCGACGCTGA	11160
CGTGGTTTGA	AGAGATTTTC	GAAGAGTATT	AAGCTAGTTT	TTAGGTTTGG	CTCTTATACT	11220
AGAGTCATCA	AAAAGAAACG	AGGACTCTCA	TATGACAGTA	ACGATTAAAG	TAAATTACCA	11280
AACCACTTTC	CAAAAGAAGG	AAGCAAAAAA	CTAGTATAAA	CAGAAGAGAG	AGCGAAATGC	11340
TCTTTTTTCG	TTTCTAAAAC	TACTTTTCAGC	CCATCATCCT	AAAAGTAAAG	AATCTAAATT	11400
CACTTTCTAT	TTACCCTTCT	TTCTTGCATT	GATTACATAG	ATATGCTACA	GTTGTGGTAA	11460
CGATTACAAA	ATAAAAGGAG	CATGCTATGA	AAAATCCAGC	TTTGCTAGAA	GAAATTAAGA	11520
CCTATAGAGG	AAGGGATGAG	GTTCGGGAAG	ACTTTGATGA	TTTCTGGGAT	GGGGAAGTGA	11580

963

AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAAG AGATTTCAC ATTCCTCAAG	11640
TCAAGTGCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG	11700
TTCTTCCAAA GAGTGAGGAG AAGGTCCCAT TAATCTTCCA TTTTCATGGT TATATGGGAC	11760
GTGGCTGGGA CTGGGCCGAC ATGCTGGGCT TCACCGTAGC TGGTTACGGT GTTGTTCCTA	11820
TGGATGTGCG GGGCCAGTCA GGTACTCAC AAGACGGCTT GCGTCTCCTT TTAGGAAATA	11880
CCGTGAAGGG GCATATTATC CGTGGTGCTG TGAAGGTCG GGACCACCTC TTTTATAAGG	11940
ATGTTTATCT GGATATTAC CAGTTGGTCG AAATGTGTGC TAGTCTGTCT CAGGTGATG	12000
AGAAGCCTCT TTCTAGCTAT GGTGCCTCAC AAGGAGGGGC TCTAGCTCTA GTTGCAGCAG	12060
CGCTCAATCC TCGAATTCTAG AAAACAGTTG CCATTTATCC CTTCTTGTC AACTTCAGAC	12120
GGGTGATTGA GATTGGTAAT ACTAGCGAGG CTTACGACGA ACTTTCCGT TATTTCAAGT	12180
TTACGACCCC CTTCCATGAA ACAGAGGAGG AAATCATGGC GACCCTTGCC TATATCGATG	12240
TCAAAAATCT TGCCCATCGT ATCCAAGGTG AGGTTAAGAT GATTACGGGC TTGGACCAGC	12300
ATGTTTGCTA TCCCATTACC CAGTTTGCGA TTTATAATCG TCTGACCTGC GATAAAACCT	12360
ATCGCATCAT GCCTGAGTAT GCTCACGAAG CCATGAATGT ATTGTCAAT GACCAAGTCT	12420
ACAACTGGCT CTGTGGAAGT GAGATTCCTT TTAAATATCT AAAATAAGGA GTCGACTCTA	12480
AGCACAAAAT CTTAAAAATT ACAAACACGC ATAGTATCAG GGGATTAAGA AAACTTTATA	12540
CTATGCGTTT TATCATGGAA ATATAGTAAA ATGAAATAAG AACAGGACAA ATCGATCAGG	12600
ACAGTCAAAAT CGATTTCTAA CAATGTTTGA GAAACAAATG TGTACTATTC TAGTGCAAT	12660
CTATTATATT TATAGAATTT TTTGTGCTA GATTTGTCAA ATTGCTTAAA ATAATTTTTT	12720
TCAGAAAGCA AAAGCCGATA CCTATCGAGT AGGGTAGTTC TTGCTATCGT CAGGCTTGTC	12780
TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAAACCACG TCAGCTTCGC CTTGC	12835

(2) INFORMATION FOR SEQ ID NO: 142:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5020 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGCATATGA AGAACAAAAG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC	60
ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT	120

964

ACTTTGTATG GTATTGGCTT GTTAGCTCTC ATCGGACTTG CTAGAAATTT TGGAGAGGCT	180
GGTCAAAATC TTGCAAGCTA CTTGCAGACC TTGCATCAGA GCTTGACGGA TAAAACAAGT	240
GACTTTCGTT TAATTTTAGG ATTACTGGCC TTTGGTTATF CTTAACTG TGTTCAGATG	300
GACAAGAAAA GTTGAGAAAA GACCTATTTC AACCTTGGGA TTTTATAGAG AGAATTTCCCT	360
CAGCAATCTT CTGAAAGGAT TTAGTCTAGG CCTGGCACTT TTTCTTCTGA CCTGTTAGG	420
TTTAGTGGTC TTAGGTCAAT ATCGTTTGA ATCCATTAC TTGAATCCTT ATTCTCTGC	480
CTTTGTCGTC TTTACTATCC CATTTTGGAT TTTACAGGGG ACAGCAGAAG AAGTGGTGGC	540
CCGTGCTTCG CTACTTCCTC AATTGGCCTC AAGAACCAAT CTAAACTAG CTATTCTTAT	600
ATCTAGCCTG TTCTTTACCC TGCTTCATAT GGGCAATTCT GGTCTCACCC CTCTATCTCT	660
AGTAAATCTC TTTTATTTCG GAGTTGCCAT GGCTCTTTAC CTTCTCAAAA CTGATACAGT	720
TTGGGGTGTT GCAGGTATTC ATGGTGCTTG GAATTTTGCT CAGGGTAATC TCTTTGGGAT	780
TTTAGTTAGT GGTCAACCGT CAGAACGTCT CTGATGACCT TTTTACCACA AGGCAATCAA	840
GATTGGCTAT CAGGTGGTTC TTTTGGCATA GAAGGTCCA TTATGACAAG TCTGGTATTA	900
CTACTGCTGA TTGTCTATCT TGCTAATAAA TTAAAGAAAG AAAATGAAAG GATGTGACTT	960
CGGTCCGTCC TTTTCTTCGT GAAAATACTA TAAGTATGCT AAAATAGGAA TAGCACATGG	1020
AGAGAGGATT CTTATGATCA ATCACATTAC AGATAATCAA TTTAACTAG TATCAAAATA	1080
TCAACCATCA GGAGATCAAC CCCAAGCTAT CGAGCAGTTG GTGGATAACA TTGAGGGGGG	1140
AGAAAAAGCT CAGATTCTGA TGGGGGCGAC TGGAACAGGG AAGACCTATA CTATGAGTCA	1200
GGTCATTTCT AAAGTCAATA AACCACTCT GGTATTGCC CACAATAAAA CTCTGGCTGG	1260
TCAGCTCTAT GGGGAGTTTA AGGAATTTT CCCTGAAAAT GCAGTTGAGT ATTTCTGATC	1320
CTACTATGAT TATTACCAGC CAGAGGCCTA TGTCCCTTCT AGCGATACCT ATATTGAGAA	1380
GGATAGTTCT GTCAATGACG AGATTGACAA GCTTCGCCAC TCAGCTACCT CAGCCCTTTT	1440
GGAGCGTAAT GATGTTATTG TCGTGGCCTC AGTCTCTTGT ATCTATGGTT TGGGTTCCGC	1500
CAAGGAATAC GCTGATAGTG TCGTTAGTCT CCGTCCTGGT CTAGAGATTT CTCGTGATAA	1560
ACTCTTGAAT GACTTGGTCG ATATTTCAGTT TGAACGTAAT GATATTGATT TCCAACGCGG	1620
AAGATTTCGC GTTCGTGGGG ATGTGGTAGA GATTTTCCCA GCTTCCCGAG ATGAACATGC	1680
CTTTCGAGTA GAATTTTGTG GAGACGAAAT TGACCGTATT CGTGAAGTTG AGGCTCTGAC	1740
AGGTCAGGTG TTGGGAGAAG TGGATCATTT AGCGATTTTC CCAGCGACAC ACTTTGTGAC	1800
CAATGACGAC CACATGGAAG TTGCCATTGC AAAGATTTCAG GCCGAGTTGG AAGAACAATT	1860
AGCTGTCTTT GAAAAGGAAG GTAAACTGCT TGAAGCCCAG CGTTTGAAAC AGCGGACAGA	1920

965

GTATGATATC GAAATGTTGC GTGAGATGGG CTATACCAAT GGGGTTGAAA ATTATTTCTCG	1980
CCACATGGAT GGACGGACCG AAGGAGAGCC TCCTTATACG CTTCTCGACT TCTTCCCAGA	2040
TGATTTCTTG ATTATGATTG ACGAGAGTCA TATGACCATA GGGCAAATCA AGGGCATGTA	2100
CAATGGAGAC CGTTCGCGTA AAGAAATGCT GGTTAATTAT GGTTCCTGTT TGCCGTCCTGC	2160
TTTGGACAAT CGTCTCTCC GTCGGGAGGA GTTTGAGAGT CACGTTTCATC AGATTGTTTA	2220
CGTTTCAGCG ACACCTGGTG ACTATGAAAA TGAACAGACC GAGACAGTGA TTGAGCAAAT	2280
CATTCGTCCA ACGGGACTCT TGGATCCAGA GGTGGAAGTC CGTCCGACTA TGGGACAGAT	2340
TGATGACCTC TTGGGTGAAA TCAATGCCCG CGTTGAAAAA AATGAGCGTA CCTTTATCAC	2400
AACTTTGACC AAGAAAATGG CAGAGGATTT GACCGACTAC TTCAAGGAAA TGGGTATCAA	2460
GGTCAAGTAC ATGCACCTCG ATATCAAGAC CTTGGAACGG ACGGAGATTA TCCGTGACCT	2520
GCGCTTGGGT GTCCTTGATG TCTTGGTCGG AATTAACCTG CTCCGTGAAG GAATTGACGT	2580
TCCTGAAGTG AGCCTCCTAG CTATTCTCGA TGCTGACAAG GAAGGTTTCC TTCGCAACGA	2640
ACGTGGACTC ATCCAGACCA TTGGACGTGC TGCACGTAAT AGCGAAGGTC ATGTTATCAT	2700
GTATGCGGAC ACGGTTACCC AGTCTATGCA ACGTGCTATC GATGAAACTG CCCGCCGTCG	2760
CAAAATCCAG ATGSCCTATA ATGAAGAACA TGGTATCGTT CCACAAACCA TCAAGAAAGA	2820
AATCCGTGAC TTGATTGCTG TGACCAAGGC AGTTGCTAAG GAAGAAGACA AGGAAGTCGA	2880
TATCAATAGC CTCAACAAAC AAGAGCGCAA AGAACTAGTC AAAAAGCTTG AGAAACAAAT	2940
GCAAGAAGCA GTTGAAGTGC TTGACTTTGA ACTAGCAGCT CAGATTCGTG ATATGATGCT	3000
GGAAGTCAAG GCCTTGATT AGGGGAATAG TATGATTTAT TTAAGAAAGT TAAAGAAAGA	3060
AGATTTGATG TCTTTATGGG AAATGGCTTA TTCACAGCTT AATCCAGTTT GGAAACAGTA	3120
TGATGCTCCC TATTATGATG ATTATCAGTA TTTTCAAAT TTAAAGAAT TCGAACTACA	3180
AAAATCAGAA TCCATTTTAA GCAACTCAAA TCGCCTTGGT ATTTTGTGTG ATGATAAACT	3240
AGTTGGGACT GTTTCGCGTT ATTGGGTATG TAAAGAAACA AGATGGATGG AATTGGGAAT	3300
TGGTATTTAT GATAAAAAAT TCTGGAACAC TGGTATTGGG AAAGTTGCTA TGTTGCAGTG	3360
GATAGATAGG ACGTTTCAGG ATTACTTGGA GTTGGAGCAT CTGGGTTTGA CAACTTGGTC	3420
AGGAAATATT GGTATGATGA AACTTGCTGA AAAATTAAGA ATGAAAAAAG AAGCTCATAT	3480
TCCAAAAGTT CGTTATTATC AAGGTAAATA TTTTGACAGT ATTAAATATG GTATTTTGAG	3540
AGAAGACTGG GAGAAAAATA ATGACGGTTA TTATCAAATC AATGGAACT CCTGAAGAGA	3600
TAGAAGGTAA ATCCTTCGTT CACTGGCAAA CGTGGAGAGA GGCTTATGAT GACCTTTTGC	3660

966

CTGCGGAATT TCAGGAGACA ATGACATTAG AAAGATGTCG ACTCTTTAGT CAAAAGTATC	3720
CAGAAAATAC ATTGATTGCG ATGGATGGTG TGAAGATAGT TGGTTTATA AGTTATGGCA	3780
ACTGTGCTGA TGAGACTATT CAAGCTGGTG AAATTATTGC TTTATATGTT TTAAGACT	3840
ATTATGGAAG AGGAATCGCA CAAAAGTTAG TGAAGCAGC TTTGACTGAT CTTAATCAT	3900
TTTCTGAAAT TTTCTTATGG GTATTGAAAG ATAACAAGCG CGCCATTGCT TTCTATCAAA	3960
AAATGGGTTT TACTTTTGAT GGACAAGAAA AAATACTTGA ACTTGGAAAG CCTATAAAGG	4020
AAAAACGGAT GGTATTCTAT TCTAAATAAT TCTCAAAAGT AAAAGCTAAT ATGGTACCAA	4080
GTCTGAAAAT TTAATAAATT AGAAGCGAG TAAATTTATG TCCCGTTCCC AATTAACAAT	4140
TTTAACAAAT ATCTGCTCTGA TTGAAGACCT CGAAACTCAG CGCGTGGTGA TGCAGTATCG	4200
CGCCCTGAA AACAAATCGCT GGTCTGGTTA TGCCTTTCCT GGAGGTCATG TAGAAAATGA	4260
TGAGGCTTTT GCGGAGTCTG TCATTCTGTA AATCTACGAA GAAACAGGGT TGACTATCCA	4320
AAATCCTCAA CTTGTGCGCA TTAATAAATT GCCACTAGAT ACAGGTGGGC GCTATATTGT	4380
CATTGTGTAT AAGGCGACTG AGTTCTCTGG TACCCTTCAA TCTTCAGAAG AGGGAGAAGT	4440
TTCTTGGGTG CAAAAGACC AGATTCCAAA CTAAATCTG GCCTATGATA TGCTACCATT	4500
GATGGAATG ATGGAAGCTC CCGACAAGTC AGAGTTTTC TACCCTCGCC GTACAGAAGA	4560
CGATTGGGAA AAGAAAATCT TCTAGTCTTT TACTAAATAA CCTAGCTGAT CCAAGGCCTC	4620
CTCGATATAG TGGAGGTCTT GTTGTCTCTC GGCTTCAACT AGGTGATAAT GAATACCATC	4680
TGTTAACTCA GAAATTGGCT TAAAGTCAGA ACGTTCAACT TGTCTAGAA AATGTTGCAC	4740
GTGCGGCGCA CAGGTCAGTT TTAGTAAGGT TTCAATCTCT CCATAAACAG GATGATCAAT	4800
CAAGATATTT TGAACGCGAC CACCATTATC TACGATAGCA AGTAATTCTC GTCCAATTC	4860
TTCAACTTCA TGCTTGACCT TAAATAATTT GTGATGATAA GTATTTGCAT TAGCATCTTT	4920
ATAGATATAA CCACGATTGG TAGATAGAAT TGGAGATCCA TCAGCTCTTA AAATTGCAAT	4980
ATCTTGAACA ATAATTGTC GAGTGACATG AAAGTGCTCA	5020

(2) INFORMATION FOR SEQ ID NO: 143:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4965 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

AAAAAGTGGC AATCCATTGA TTGGCCACTT CATTTAGAGA ATTATCGTCT CGCCCTTGAA	60
---	----

967

GAAGAAGGTC GTGTAGTACT TGAGTTACTG CTATCGCTAG AACTACTACT TGAAGTCTG	120
GAGCTGGATG GAGTTGGTAG ACTCCCCACA ATACTAGACC AACCATTCTG ATAATCCGCA	180
TCACCTCCGC CAATAGCAA GCGATAACTT GTCGCTGGCG CTCCTGACTT ATTAGCCCAA	240
TAGCTGGTAA CAGTCGAACC TGTGACCTCT ACTTCTTTTC CTTC AACAGA AACCTTCTCT	300
GGTTTTTGAC CTGTTGATTT CAAGACTTCC GATTTCACTA CACTAGGATC TAAAGCAAAG	360
CGCTCGTTCC CCCAAATGCT TGGGGAAGCT TGCTGAATCG CATTACCAG ATGAGCCATG	420
TAATTAGAGT TATTAGAATA ACCTGCTCTA CGTGACAATG AATGATTATC ATCATGCCCA	480
ATCCAGCCAC CTAGGGTTAA TCTAGGTGTC GAAAGCATGA GCCACATATT TTCGTCTTGG	540
TTGGTTGTAC CAGTCTTCCC AATCCAATCT GCATTAGCCA GAGTAGGATT TAAAGAAGTC	600
AGGTTAGACT TGAAGGTTGT TGTCACACGA GAGGATAGAA CTTCTCGTAG CAATCCCTGC	660
ATAATCGTCG CAGTAGCTTT TGAATAGACT TGAACCGGTT TATCCTGATA CTCATACACC	720
ACTCTACCAT CTGCTGCTTC AATCTTTGAA ATCACATGCT TCTGATGATA AACTCCATTA	780
TTAGCTAAGG TCTGATAGCC ATTGGTATGC TGGGCAACTG TGACTTCAAT ACCACCACCC	840
ATTGGCAAGC TCTCAATACC GTACTCAGGA ATCTCGTAAC CCATCTTTTC CATATAACCC	900
TTGACATCAA CACCCTTTTC ACGGAGCATA CGATAGGTCC AGTAAGCAGG GATATTCCAT	960
GAATAGTTCA GAGCTTCTCC CAAGGTCATC ATTCCTGTTC CCTTGCTATT AGCATACATA	1020
ATCGGATTGC CATTAGCAA GTTTGTTGGA TAGTTAGATA GAATCGTTTC ACTTCCCATC	1080
AAGCCCTGGT CAATAGCAAT ACCGTAGGCC AGCAAGGGCT TGGTAGTAGA AGCTGGCGAA	1140
CGTTTGGTAT CAAAGGCATG ATTATTTTGA TTTTCTTGAT AATTACGACC ACCTACAAAG	1200
CCTAGAATAG CACCTGTTTG GTTATCCATC AAGACATTCC CTACTTCTAC ACGACCTGTT	1260
CCATCGTCTA AAAGATAGCC ATAATCAGCA ACCGCACTTT GCATGGCAGA ATGAATTTTC	1320
TGATCTATGG TAGTAGTAAT CTTATAACCA CCATTTTCAA TTTCCCTGGC TGCCAAATCT	1380
CGATAAACT TCTGAGTTGC CTCATTTTTC AACTCCTTAG CGGAGACATT GTCTCTCTGA	1440
GCTAGATAGT CATACATACG TTCTTGAGCT TCTGCCAAAG TTGTAAAGTA TAAATAGTCT	1500
CGTGAAATTC CTGTAACCGT GCCCGATGGT AAAAAGTCCT GTTTAAGGTC ATAATCCTTG	1560
TACTGAGAAT ACTCGTCTTT GCTTAATGCA CCTGTACGAT ACATACTGTA AAGAACTGCC	1620
TTAGCCCGTC TTAAGCCAAT TTCTAGGTCT TCATCACTCT TCAACTCCCC AGTATTTTCA	1680
TAAGGAGAGT AAGTAATGGG ACTCTGTGGA AGTCCTGCTA AAAATGCTGC TTGAGGAACA	1740
GTCAACTGAC TGGCATCTAC ACCGAAAATT CCCTCAGCTG CTTGCCGAGC CCCTGCAATA	1800

968					
TTCTGTCCCT	TATTATTTTCG	GCCAAAGGGA	GCCACATTGA	GATAGGTCGT	TAAAATCTCA
1860					
TCTTTATTCA	TGGCGCGTTC	CAAGGCAAGA	GCATCCACAA	TCTCTGCCGC	CTTACGAGCC
1920					
AAGGTGCGCG	CATCCCCAAC	CACCTGCTGT	TTAATTAGTT	GCTGGGTCAA	GGTTGAACCC
1980					
CCACTAGAGG	AACCCAAACC	TACAAATTTT	CCCAAGGTCG	CACGAATCAC	CGCCTTGGGT
2040					
ACTACACCCCT	TATGTTCCTT	AAAGTGTTC	TCTTCTGTCT	CAATGATAGC	CTTCTTCAGA
2100					
TTTTCCGAAA	TTTGCTCAGA	TGAGATAGAA	GTGCGCAACA	AATCACTCTC	TATGGAAGCA
2160					
ATCACCGTCC	CGTCCGAATA	GGTAATCTCT	GAAATAGAAG	AGATGTCCTT	GACCTGATTC
2220					
ACCAATTCTT	CTGTCTGAGG	CACCCGAACC	TTGTCAAATA	AGGCCACTCC	GTATCCCAAA
2280					
GCAATCCCAG	CTCCCAACAT	TCCTCCTAGA	AAACCGAGTA	CAAAGAGTAA	GTAAATAAAG
2340					
GCTTTTATAC	TCAGTAAAAT	AGCTGGGAAA	ATGACTGACT	TATCTAAGGT	TTTAGATTTT
2400					
TTGGTACTTG	AACCTTCTCT	GCCAGGTCTA	GCTGATTTT	TATTTTTTTG	TTTTTGCTGG
2460					
AAAAATCCA	GCATTTTCG	TTTAAATTC	TTTAATTGAT	TTTGCATGGA	TTTCCTCACT
2520					
TTATCTATTA	TACCACAAAA	GGGAAATTTT	CAATAAAATA	GCCACTTTCT	TCCCTATTCT
2580					
GCTAGGCTAT	TGCCCCAAGTT	TGTGATACAA	TAGGTAGAAA	CAATAATTTT	AAAAAGGAGA
2640					
AAAAACACAT	GCATTTTTT	GATGAGCTAA	AAGACCGTGG	TTTGATATTT	CAAACGACTG
2700					
ATGAAGAAGC	TTTGCGTAAA	GCCCTAGAAG	AAGGTCAAGT	TTCTTATTAT	ACTGGCTACG
2760					
ATCCAACCTG	TGACAGCCTT	CACCTAGGCC	ACCTGTGTCG	AATCTTGACA	AGTCGTCGCT
2820					
TGCAACTAGC	AGGTCACAAA	CCTTATGCGC	TCGTTGGCGG	TGCTACAGGT	CTCATCGGAG
2880					
ATCCGTCCTT	CAAAGATGCT	GAACGTAGTC	TCCAAACAAA	AGACACAGTA	GATGGCTGGG
2940					
TCAAGTCTAT	CCAAGGACAA	CTTCTCGTT	TTCTTGACTT	TGAAAATGGC	GAAAACAAGG
3000					
CTGTTCATGGT	CAACAACCTAC	GACTGGTTTG	GCAGCATCAG	CTTCATTGAC	TTCCCTCCGTG
3060					
ATATTGGAAA	ATACTTCACG	GTCAACTACA	TGATGAGTAA	GGAATCTGTT	AAAAACGGA
3120					
TCGAAACAGG	AATTTCTTAC	ACTGAGTTCG	CTTACCAAAT	CATGCAAGGG	TATGACTTCT
3180					
TCGTCCTTAA	CCAAGACCAT	AATGTCACCT	TTCAAATCGG	TGGTTCTGAC	CAGTGGGGAA
3240					
ATATGACAGC	TGGTACCGAA	TTGCTTCGTC	GTAAGGCGGA	CAAGACTGGT	CACGTTATCA
3300					
CTGTTCCACT	AATCACAGAT	GCAACTGGTA	AGAAATTTGG	TAAATCAGAA	GGAAATGCCG
3360					
TCTGGCTCAA	TCCCGAAAAG	ACTTCTCCAT	ACGAAATGTA	CCAATTCTGG	ATGAACGTGA
3420					
TGGACGCTGA	CGCTGTTCGC	TTCTTGAAAA	TCTTTACTTT	CTTGTCACTT	GATGAGATTG
3480					
AAGATATTCG	TAAACAATTT	GAAGCAGCGC	CACACGAACG	CTTGGCTCAA	AAAGTCTTGG
3540					
CTCGTGAAGT	TGTTACACTT	GTTACCGGAG	AAGAAGCCTA	CAAAGAAGCA	CTTAACATCA
3600					

969

CTGAGCAACT CTTTGCAGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC	3660
TTCTGTGGTGT GCCCAACTAC CAAGTACAGG CAGACGAAAA CAACAATATC GTGGAAGTGC	3720
TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG	3780
CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGACTA TGTCTTGAGT GACGCTGATA	3840
AGTTAGAGAA TGAAGTGAAT GTTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT	3900
ACTAAACTAT TCAACATTTA TCTATAAACA AAGGAGTTAA CCTCGAGAAA GGTAACCTCT	3960
TTTGTGCTGT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC	4020
GCAAGGTTGT TAGATTATGT AAGATAGAGA GATTTGAAG ACTGAACCAA TTAAATAAGC	4080
CAAAGCCAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG	4140
TTTGCAAAGA TGATGATAAC GAATCCAAC CTGGAAGAA ATCCAAACGA TTATCTAACA	4200
ATAAGATATC ACTCATCTGC TTGAAATAT CTGCATCTC ATTCATCACC ACACCGATAT	4260
CTGATAGAGT TAAAGCCGCT GAGTCATTCA ATCCATCTCC AACCATCAAA ATAGTGTGAC	4320
CTGCTTTCTG CAGTTTCTCT ACTAACTCAA ATTCCCATC AGGTTTCAAG TCTGTATAGA	4380
CCTGATCAAA GGGCAAATCT TTGACTAATT CCTCTGTCCT AATCAAGGTG TCTCCTGTTG	4440
CCAGAATCAA TTTTTCCTCC TGTGCCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC	4500
TCAAAGGAGT ATGAATGCAG AACATTCCAA TCAATTCATT TTGATAAGCC AAGAATAAGA	4560
GATTGTAGTG ACTCTGTGAC TCTTCAATTA AAGCATTTTG TTCTGAACTG ATATGAATCT	4620
GCTCATCTCG CATCAAGACA TAATCCCAA TAAGAAGTGG TTGGCCATCT ATATGAGATT	4680
TGATCCCCTT GCTTGCAGTA TATTGGAGTT TCCCATGCAT TTCCTCATGT TCAATTCCCT	4740
CTATCTCAGC TTGCTTGACG ATGGCATTAG CAATAGGATG ATAAATGTGT TCCTCAAGAC	4800
AGGCACTGAT TCTGAGAATA TCTTCCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA	4860
CTATAGGATA ACTAGTTGTG ATTGTTCTG TCTTATCAA CAAGAAAGTA TCAACTTCCA	4920
GATATTTCTC CCTGTTGTGG CCTCTGGCTG TCATCTCTGT GCTGG	4965

(2) INFORMATION FOR SEQ ID NO: 144:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 3232 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

970

CAGGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTCGCT ACTTGCGCCA AAACAAGGAT	60
TCGATAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATTCCCCA	120
AACTGCAATA TGCAAGGTCA GAAAGAATGC CTTTGTGATAT AGTGGTAGAT ATTGTTCAAC	180
AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT	240
AAAACTTTCT TTGGATAATA TCTATTTTTT ATTGCCGTTA TAAGGATTTT TATCATAGAC	300
ATAAAATTTT TGAAATTTCC AAACAAAATA TTTTAAAAGT TTTGAAAAAG AGTTAAGATA	360
TTTTTGTAAT ACACAAAGTA AACGCTTACT TATTAAGGAG GACATTTTAT GTCATACAAA	420
ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTGGA GCCAATGGCG	480
CAACAAGTTA TTCCTAAAGC AGCATTGGC TATATCGCTA GTGGGGCGG AGATACTTTC	540
ACTTCTTTCC AGTGATTTTA GCGTCAGGTT CTTTTAGTT TTTAAAGATT ATCCGTGAAT	600
TTCTTGCTTA TTTATGATAA AATGGGAGTG TCGCAAAAAA TGACTCATCG TATTCAATTT	660
TGAGTAAAC TAGGAGGATC CCATGCTAC AGAACATATG GAAGAACTAA ATGACCAGCA	720
GATCGTTTCG CGTCAAAAAA TGGCTGCGCT CCGCAACAA GGAATCGATC CTTTCGAAA	780
ACGTTTGAA CGTACTGCAA ATTCACAAGA ATTAAGAT AAATATGCCA ACCTCGATAA	840
AGACAATTA CACGATAAAA ACGAAACAGC TACTATCGCA GGACGCTGA TAACCAAACG	900
TGGTAAAGGA AAAGTTGGTT TTGCCACCT TCAAGACCGC GAAGGCCAGA TTCAGATCTA	960
CGTTCGTAAG GATGCTGTCG GTGAAGAAAA CTACGAAATC TTCAAAAAAG CAGACCTTGG	1020
TGACTTCCTT GGTGTCGAAG GTGAAGTAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA	1080
GGCAACCCAC ATCACACACT TGTCTAAGGC TCTTCGTCTT CTTCTGAGA AATTCATGG	1140
TTTGACAGAC GTTGAAACAA TTTACCGTAA ACGTTACCTT GACTTGATTT CTAATCGTGA	1200
AAGCTTTGAA CGCTTTGTCA CTCGTTCAAA AATCATCTCT GAAATCCGTC GTTACCTTGA	1260
CCAAAAAGGA TTCCTGAAG TGGAAACACC TGTCTTCAT AATGAAGCCG GTGGTGCTGC	1320
TGCCCCGTTCA TTTATCACCC ACCACAATGC CCAAAACATT GACATGGTGC TTCGTATCGC	1380
GA CTGAGCTT CACTTAAAC GCCTTATCGT GGGTGGTATG GAACGTGTCT ATGAAATGG	1440
CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATAAC CCTGAGTTCA CTTCTATCGA	1500
AGTTTACCAA GCTTATGCAG ACTTCCAAGA CATCATGGAC TTGACTGAAG GCATTATCCA	1560
ACACGCTGCT AAATCAGTCA AAGGTGATGG CCCAGTCAAC TACCAAGGTA CTGAAATCAA	1620
GATTAACGAA CCATTTAAGC GTGTTTATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT	1680
CGATTTCTGG CAAGACATGA CTTTGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT	1740
TCCAGTTGAG AAACACTACA CTGAGGTTGG TCACATCATC AATGCCTTCT TTGAAGAGTT	1800

971

TGTTGAAGAA ACTTTAATCC AACCAACCTT TGTCTATGGA CATCCAGTAG CTGTATCTCC	1860
ACTCGCTAAG AAAAATCCTG AAGACCAACG CTTTACTGAC CGTTTCGAGC TCTTTATCAT	1920
GACTAAGGAG TACGGTAATG CCTTTACTGA GTTGAACGAC CCAATCGACC AACTTAGCCG	1980
TTTTGAAGCC CAAGCTAAAG CCAAAGAAGT TGGTGATGAT GAAGCGACAG GAATCGACTA	2040
TGACTACATT GAAGCTCTTG AATACGGTAT GCCACCAACA GGTGGTTTGG GAATCGGTAT	2100
CGACCGTCTC TGCATGCTCC TCACTGATAC AACAACTATC CGTGATGTAT TGCTCTTCCC	2160
AACAATGAAA TAAATTCTTA TCCTCTGGGT CTTATCAGAG GATTTTTTGA TTCAAAAAGA	2220
GACTGAATTT AAGGAGAAAA TGAAGTGTAG TATATTGAAA TTGAAATAGT AACTTTTGAT	2280
TTCTAAGACA TTGTTAGAAA TTGGTTTAAA TTCCCTAAGC AATTTGTGCA TGTTTTATTT	2340
CATTTTACGA TAGTACGCTG AAACCTTTCA AAAAGTACTA GAAATTGACT TGGATTCCCC	2400
AATTGATTTG TTCAGATTCA CTATAAATAA AAAATTAATA AGTGGGATAG GAAGTTAGCG	2460
TCAACTAGGA TAGTATCTTG CTTAAACAGT ATATATGGGA TTGATATAAG TCCATAGGTC	2520
CTATTAGAGG ATGTTCTGGT GTCTTATTCA CTTGTTTTTT ATAGTATTAG TAGATAGAAT	2580
CAGCAAATAA AAACCCAAAT CATTCATACC TCTCTCAACT AGATGTAAGT TACAAAACCC	2640
CTGACCTCAT GAGCCACTTT CTTCCTCCTC ATGAGGTCAG TTTTACTTTC TGCTGTTCCA	2700
GTATCGTTTT TCCTCGCTAG ATTTCCCTCA AAGGCAGAC TCCTCCCTTG GTGCGTCACA	2760
CGATTTTTTC ATCTCGACTG TTCTTTAATG CATCATTAAC GACGCTTTTC TTCTAGGTGG	2820
TTCATAAGGA ACAGGAAGAT TCAGGTTGAC TTTTCTAATC CTAGAATAAA GTGCTGAAAA	2880
CAATTCGGAA TAGGCATAGA GACTAGACAA TTTGAGGAGC TGCTTGCGTC CTGTTCGAAC	2940
ACATTTTCCC ACCACGTGAA GAAAAAGATG CCGGAAGCGT TTGATTGTTA AAGTTTGGA	3000
GTCACCTCCA GCTAGATGTT TGAGAAAAAG ATAGAGATTG TAGGCGATAC AGTCATCAT	3060
CATACGAACT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTATCGCCAA AAAATCCCTC	3120
CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACGTCCA CGATAAAGCT GAAACTGGTC	3180
TTGGCTTGTT CCACTCGTCA TATTTGTAAC GAGAGAAATA ACATCGTAGA AC	3232

(2) INFORMATION FOR SEQ ID NO: 145:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10711 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

972

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

CCGGAGAAAA TGATGAAAAG TTCAAACTA TTTGCCCTTG CGGGCGTGAC ATTATTGGCG	60
GCGACTACTT TAGCTGCATG CTCTGGATCA GGTTCAGCA CTAAAGGTGA GAAGACATTC	120
TCATACATTT ATGAGACAGA CCTGATAAC CTCAACTATT TGACAACTGC TAAGGCTGCG	180
ACACAAATAT TACCAGTAAC GTGGTTGATG GTTTGCTAGA AAATGATCGC TACGGGAACT	240
TTGTGCCGTC TATGGCTGAG GATTGGTCTG TATCCAAGGA TGGATTGACT TACACTTATA	300
CTATCCGTAA GGATGCAAAA TGGTATACTT CTGAAGGTGA AGAATACGCG GCAGTCAAAG	360
CTCAAGACTT TGTAACAGGA TTAAATATG CTGCTGATAA AAAATCAGAT GCTCTTTACC	420
TTGTTCAAGA ATCAATCAAA GGGTTGGATG CCTATGTAAA AGGGGAAATC AAAGATTTC	480
CACAAGTAGG AATTAAGGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACCAG	540
AAAGCTTCTG GAATTCTAAG ACAACCATGG GTGTGCTTGC GCCAGTTAAT GAAGAGTTTT	600
TGAATTCAAA AGGAGATGAT TTTGCCAAAAG CTACCGATCC AAGTAGTCTC TTGTATAACG	660
GTCCTTATTT GTTGAAATCC ATTGTGACCA AATCCTCTGT TGAATTTGCG AAAAATCCGA	720
ACTACTGGGA TAAGGACAAT GTGCATGTTG ACAAAGTTAA ATTGTCATTC TGGGATGGTC	780
AAGATACCAG CAAACCTGCA GAAAACCTTA AAGATGGTAG CCTTACAGCA GCTCGTCTCT	840
ATCCAACAAG TGCAAGTTTC GCAGAACTTG AGAAGAGTAT GAAGGACAAT ATTGCTCTATA	900
CTCAACAAGA CTCTATTACG TATCTAGTTG GTACAAATAT TGACCGTCAG TCCTATAAAT	960
ACACATCTAA GACCAGCGAC GAACAAAAGG CATCGACTAA AAAGGCTCTC TTAAACAAGG	1020
ATTTCCGTCA GGCTATTGCC TTTGGATTTG ACCGTACAGC CTATGCCTCT CAGTTGAATG	1080
GACAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTGTTCAAG	1140
CAGATGGTAA AAACCTTGGC GATATGGTCA AAGAGAAATT GGTCACTTAT GGGGATGAAT	1200
GGAAGGATGT TAATCTTGCA GATTCTCAGG ATGGTCTTTA CAATCCAGAA AAAGCCAAGG	1260
CTGAATTTGC TAAAGCTAAA TCAGCCTTAC AAGCAGAAGG AGTCCAATTC CCAATTCATT	1320
TGGATATGCC AGTTGACCAA ACAGCAACTA CAAAAGTTCA GCGCGTCCAA TCTATGAAAC	1380
AATCCTTGGA AGCAACTTTA GGAGCTGATA ATGTCATTAT TGATATTCAA CAACTACAAA	1440
AAGACGAAGT AAACAATATT ACATATTTTG CTGAAAATGC TGCTGGCGAA GACTGGGATT	1500
TATCAGATAA TGTCGGTTGG GGTCCAGACT TTGCCGATCC ATCAACCTAC CTTGATATTA	1560
TCAAACCTTC TGTAGGAGAA AGTACTAAAA CATATTTAGG GTTTGACTCA GGGGAAGATA	1620
ATGTAGCTGC TAAAAAAGTA GGTCTATATG ACTACGAAAA ATTGGTTACT GAGGCTGGTG	1680
ATGAGACTAC AGATGTTGCT AAACGCTATG ATAAATACGC TGCAGCCCAA GCTTGGTTGA	1740

973

CAGATAGTGC TTTGATTATT CCAACTACAT CTCGTACAGG GCGTCCAATC TTGTCTAAGA	1800
TGGTACCATT TACAATACCA TTTGCATTGT CAGGAAATAA AGGTACAAGT GAACCAGTCT	1860
TGTATAAATA CTTGGAACCT CAAGACAAGG CAGTCACTGT AGATGAATAC CAAAAAGCTC	1920
AGGAAAAATG GATGAAAGAA AAAGAAGAGT CTAATAAAAA GGCTCAAGAA GATCTCGCAA	1980
AACATGTGAA ATAACCTGTG CAAAATATAA GAAAGGATT AGTATTTCCC TTGAATGCTG	2040
AATCCTTTTT TACATTTGTA AAGAAAGATT CTAAATGTA CGGACCCCCA AAAGTTGGAG	2100
CCTCTTTTTG TCAGAATAGA GAAAATTTTT GTTAATTTTA CTGTTTCCT ATTGCTTCT	2160
CAGCTATTAT TTGTTATATT AAAAGTATAA TTATTTTTTA TTTATCAGAG TTAAGCATTG	2220
CACTTTCAGA GGAAGGACTA TTTTTTAAAA AGAAATGTA AACGTTTGCT CAAAAATGAA	2280
AGGATTTAGA AGTTTATGAA TAAAGGATTA TTTGAAAAAC GTTGTAATAA TAGTATTCGG	2340
AAATTTTCAT TAGGTGTTGC TTCTGTTATG ATTGGAGCTG CATTCCTTGG GACAAGTCCG	2400
GTTCTTGCAG ATAGCGTGCA GTCTGGTTCC ACGGCGAACT TACCAGCTGA TTTAGCTACT	2460
GCTCTTGCAA CAGCAAAAGA GAATGATGGG CGTGATTTTG AAGCGCCTAA GGTGGGAGAA	2520
GACCAAGGTT CTCCAGAAGT TACAGATGGA CCTAAGACAG AAGAAGAACT ATTAGCACTT	2580
GAAAAAGAAA AACC GGCTGA AGAAAAACCA AAAGAGGATA AACCTGCAGC TGCTAAACCT	2640
GAAACACCTA AGACGGTAAC CCCTGAATGG CAAACGGTAG CGAATAAAGA GCAACAGGGA	2700
ACAGTCACTA TCCGAGAAGA AAAAGGTGTC CGCTACAACC AACTATCCTC AACTGCTCAA	2760
AATGATAACG CAGGCAAACC AGCCCTGTTT GAAAAAGAAG GCTTGACCGT TGATGCCAAT	2820
GGAAATGCAA CTGTTGATTT AACCTTCAAA GATCATTTCTG AAAAGGGCAA ATCACGCTTT	2880
GGTGTCTTTT TGAAATTTAA AGATACCAAG AATAATGTTT TTGTCGGTTA TGACAAGGAT	2940
GGCTGGTTCT GGGAGTATAA ATCTCCAACA ACTAGCACTT GGTATAGAGG TAGTCGTGTT	3000
GCTGCTCCTG AACAGGATC AACAAACCGT CTCTCTATCA CTCTCAAGTC AGACGGTCAG	3060
CTAAATGCCA GCAATAATGA TGTCAATCTC TTTGACACAG TGACTCTACC AGCTGCGGTC	3120
AATGACCATC TTAATAATGA GAAGAAGATT CTTCTCAAG CGGGCTCTTA TGACGATGAG	3180
CGAACAGTTG TTAGCGTTAA AACGGATAAC CAAGAGGGGG TAAAAACAGA GGATACCCCT	3240
GCTGAAAAAG AACAGGTCC TGAAGTTGAT GATAGCAAGG TGACTTATGA CACGATTGAG	3300
TCTAAGGTCC TCAAAGCAGT GATTGACCAA GCCTTCCCTC GTGTCAAGGA ATACAGCTTG	3360
AACGGGCATA CTTTGCCAGG ACAGGTGCAA CAGTTCAACC AAGTCTTTAT CAATAACCAC	3420
CGAATCACCC CTGAAGTCAC TTATAAGAAA ATCAATGAGA CAACAGCAGA GTACTTGATG	3480

974

AAGCTTCGCG ATGATGCTCA CTTAATCAAT GCGGAAATGA CAGTACGCTT GCAAGTTGTA	3540
GACAATCAAT TGCACTTTGA TGTGACTAAG ATTGTCACACC ACAATCAAGT CACTCCAGGT	3600
CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA	3660
GTCTCTGTTT CTAGTAATCA AACTGGTGCT AAGTTTGATG GGGCAACCAT GTCAAACAAT	3720
ACGCATGTCA GCGGAGATGA TCATATCGAT GTAACCAATC CAATGAAGGA TTTGGCTAAG	3780
GGTTACATGT ATGGATTTGT TTCTACAGAT AAGCTTGCTG CTGGTGTTTG GAGTAACTCT	3840
CAAAACAGCT ATGGTGGTGG TTCGAATGAC TGGACTCGTT TGACAGCTTA TAAAGAAACA	3900
GTCCGAAATG CCAACTATGT AGGAATCCAC AGCTCTGAAT GGCAATGGGA AAAAGCTTAT	3960
AAGGGCATTG TTTTCCCAGA ATACACGAAG GAACTTCCAA GTGCTAAGGT TGTATCACT	4020
GAAGATGCCA ATGCAGACAA GAACGTGAT TGGCAAGATG GTGCCATTGC TTATCGTAGC	4080
ATTATGAACA ATCCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG	4140
ATGAACTTTG GTTCTCAAGC AAAAAACCCA TTCCTTATGA CCTTGGATGC TATCAAGAAA	4200
ATCAATCTCC ATACAGATGG TCTTGGCAA GGTGTTCTCC TTAAGGATA TGGTAGCGAA	4260
GGCCATGACT CTGGTCACCT GAACTATGCT GATATTGGTA AGCGTATCGG TGGTGTGCAA	4320
GACTTCAAGA CCCTAATTGA GAAGGCTAAG AAATATGGAG CTCATCTAGG TATCCACGTT	4380
AACGCTTCAG AAACCTATCC TGAGTCTAAA TACTTCAATG AAAAAATTCT CCGTAAGAAT	4440
CCAGATGGAA GCTATAGCTA TGCTTGGAAAC TGGCTAGATC AAGGTATCAA CATTGATGCT	4500
GCCTATGACC TAGCTCATGG TCGTTTGGCA CGTTGGGAAG ATTTGAAGAA AAAACTTGGT	4560
GACGGTCTCG ACTTTATCTA TGTGGACGTT TGGGGTAATG GTCAATCAGG TGATAACGGT	4620
GCCTGGGCTA CCCACGTTCT TGCTAAAGAA ATTAACAAAC AAGGCTGGCG CTTTGGCATC	4680
GAGTGGGGCC ATGGTGGTGA GTACGACTCT ACCTTCCATC ACTGGGCAGC TGAATTGACC	4740
TACGGTGGCT ACACCAATAA AGGTATCAAC AGTGCCATCA CCCGCTTTAT CCGTAACCAAC	4800
CAAAAAGATG CTTGGGTAGG GGACTACAGA AGTTATGGTG GTGCAGCCAA CTATCCACTG	4860
CTAGGTGGCT ACAGCATGAA AGACTTTGAA GGCTGGCAGG GAAGAAGTGA CTACAATGGC	4920
TATGTAACCA ACTTATTTGC CCATGACGTC ATGACTAAGT ACTTCCAACA CTTCCTGTA	4980
AGTAAATGGG AAAATGGTAC ACCGGTGAAT ATGACCGATA ACGGTAGCAC CTATAAATGG	5040
ACTCCAGAAA TGCGAGTGGA ATTGGTAGAT GCTGACAATA ATAAAGTAGT TGTAACCTCGT	5100
AAGTCAAAATG ATGTCAATAG TCCACAATAT CGCGAACGTA CAGTAACGCT CAACGGACGT	5160
GTCAATCAAG ATGGTTCAGC TTACTTGACT CCTTGGAATC GGGATGCAAA TGGTAAGAAA	5220
CTTCTACTG ATAAGGAAAA GATGTACTAC TTCAATACGC AGCCCGGTGC AACAACTTGG	5280

975

ACCCTTCCAA GCGATTGGGC AAAGAGCAAG GTTTACCTTT ACAAGCTAAC TGACCAAGGT	5340
AAGACAGAAG AGCAAGAACT AACTGTAAAA GATGGTAAAA TTACCCTAGA TCTTCTAGCA	5400
AATCAACCAT ACGTTCTCTA TCGTTCGAAA CAAACTAATC CTGAAATGTC ATGGAGTGAA	5460
GGCATGCACA TCTATGACCA AGGATTTAAT AGCGGTACCT TGAAACATTG GACCATTTCA	5520
GGCGATGCTT CTAAGGCAGA AATTGTCAAG TCTCAAGGGG CAAACGATAT GCTTCGTATT	5580
CAAGGAAACA AAGAAAAAGT TAGTCTCACT CAGAAATTAA CTGGCTTGAA ACCAAATACC	5640
AAGTATGCCG TTTATGTTGG TGTAGATAAC CGTAGTAATG CCAAGGCAAG TATCACTGTG	5700
AATACTGGTG AAAAAGAAGT GACTACTTAT ACCAATAAGT CTCTCGCGCT CAACTATGTT	5760
AAGGCCACG CCCACAATAC ACGTCGTGAC AATGCTACAG TTGACGATAC AAGTTACTTC	5820
CAAACATGT ACGCCTTCTT TACAAC TGGA GCGGACGTCT CAAATGTTAC TCTGACATTG	5880
AGTCGTGAAG CTGGTGATCA AGCAACTTAC TTTGATGAAA TTCGTACCTT TGAACAAT	5940
TCAAGCATGT ACGGAGACAA GCATGATACA GGTAAAGGCA CCTTCAAGCA AGACTTTGAA	6000
AATGTTGCTC AGGGTATCTT CCCATTGTGA GTGGGTGGTG TCGAAGGTGT TGAAGATAAC	6060
CGCACTCACT TGTCTGAAAA ACACAATCCA TATACACAAC GTGGTTGGAA TGGTAAGAAA	6120
GTCGATGATG TTATCGAAGG AAATTGGTCA CTCAAGACAA ATGGACTAGT GAGCCGTCGT	6180
AACTTGTTT ACCAAACCAT CCCACAAAAC TTCCGTTTGG AAGCAGGTAA GACCTACCGT	6240
GTAACCTTTG AATACGAAGC AGGATCAGAC AATACCTATG CTTTGTAGT CGGTAAGGGA	6300
GAATTCAGT CAGGTCGTCG TGGTACTCAA GCAAGCAACT TGGAAATGCA TGAATTGCCA	6360
AATACTTGA CAGATTCTAA GAAAGCCAAG AAGGCAACCT TCCTTGTGAC AGGTGCAGAA	6420
ACAGGCGATA CTTGGGTAGG TATCTACTCA ACTGGAAATG CAAGTAATAC TCGTGGTGAT	6480
TCTGGTGGAA ATGCCAACTT CCGTGGTTAT AACGACTTCA TGATGGATAA TCTTCAAATC	6540
GAAGAAATTA CCCTAACAGG TAAGATGTTG ACAGAAAATG CTCTGAAGAA CTAATTGCCA	6600
ACGGTTGCCA TGACTAACTA CACCAAAGAG TCTATGGATG CTTTGAAAGA GCGGTCTTT	6660
AACCTCAGTC AGGCCGATGA TGATATCAGT GTGGAAGAAG CGCGTGCAGA GATTGCCAAG	6720
ATTGAAGCTT TGAAGAATGC TTTGGTTCAG AAGAAGACGG CTTTGGTAGC AGATGACTTT	6780
GCAAGTCTTA CAGCTCCTGC TCAGGCTCAA GAAGGTCTTG CAAATGCCTT TGATGGCAAT	6840
GTGTCTAGTC TATGGCATA ATCTTGAAT GGTGGAGATG TAGGCAAGCC TGCAACTATG	6900
GTCTTGAAAG AACCAACTGA AATCACAGGA CTTGCTATG TTCCGCGTGG ATCAGGTTCA	6960
AATGGTAACT TGCGAGATGT GAAACTTGTG GTGACAGATG AGTCTGGCAA GGAGCATAAC	7020

976

TTTACTGCAA CTGATTGGCC AAATAACAAC AAACCAAAAG ATATTGACTT TGGTAAGACA	7080
ATCAAGGCTA AGAAAAATTGT CCTTACTGGT ACCAAGACAT ACGGAGATGG TGGAGATAAA	7140
TACCAATCTG CAGCGGAACT TATCTTTACT CGTCCACAGG TAGCAGAAAC ACCTCTTGAC	7200
TTGTCAAGGCT ATGAAGCAGC TTTGGTTAAG GCTCAGAAAT TAACAGACAA AGACAATCAA	7260
GAGGAAGTAG CTAGCGTTCA GGCAAGCATG AAATATGCGA CGGATAACCA TCTCTTGACG	7320
GAAAGAATGG TGGAATACTT TGCAGATTAT CTCAACCAAT TAAAAGATTC TGCTACGAAA	7380
CCAGATGCTC CAACTGTAGA GAAACCTGAG TTTAAACTTA GATCTTTAGC TTCCGAGCAA	7440
GGTAAGACGC CAGATTATAA GCAAGAAATA GCTAGACCAG AAACACCTGA ACAAATCTTG	7500
CCAGCAACAG GTGAGAGTCA ATCTGACACA GCCCTCATCC TAGCAAGTGT TAGTCTAGCC	7560
CTATCTGCTC TCTTTGTAGT AAAAACGAAG AAAGACTAGT ATTTAGTAAA ACCTCTTAAC	7620
AAGATTACGG AAGCAGTCTC TATCTTTTCC AATGAGGTTT ATAGTACAGA AAAAGCCTGA	7680
GAAGATGTCT TCTCAGGCTT TTGTTAAGCA CATAAATACA ATAGTGCTAT GACAAAATCA	7740
CCCAGAAAAA TCTGGGTGAT AAATGTTATG GTTGTGCTGG TTGAGGATTC TGATTTTGT	7800
GATCAGGGGT TGTATTTGAT TGTTCGTAT TATTGTTAGG ATTGGTAGTC GTACTATTAT	7860
TTGTGCTTGG AGTGGTTGAG CTAGACTGTG AAGTTGAACT ATCTGATGAT GAGCTTGAAC	7920
TTTCAGTTGA TGGGGGTTGT TGTGGAGCAG GTGAGTTCCA CGTAGAACGA GCACCATTTT	7980
TAAATACGAA TTCTCCATTT CTGTAGAGCC CCTCTGGTAT ATTCCAATCT TCTGGATTGC	8040
TTCCCTCAGA CAGGTAGGTC ATCATAGAGC GGTAACCTTT GGCAGCGACC GTAAGGCCAT	8100
TGCCTACAAG TGGTGTGAGA CGGTTAGAAT AGCCTGTCCA TACAGCCATT GAATATTTAC	8160
GCGTATAGCC AGCAAATAGT TCATCAGGTG CTACAAATTG AGAGGTCTTG ATGTGGTTTT	8220
CAATTTCCTC GTCTGTATAG TTAGAGGTTC CTGTTTTACC AGCCTGAGGG AGCCAAGCAA	8280
GATAGGCATT TCGTCCAGTT CCATAAGTCA AGACTGTTTT CATCATGTCG GTCATCATAT	8340
AGGCTGTCGT TTCCCTCATG GCACGAGTTC CGACATTAGA GAACTCTTTT TCACTCCCAT	8400
CACTAAAGAC GACTTTATGG ATATACATTG GTTTATAGTA AGTTCCACCA TTTGCAAAGG	8460
CAGCGTAAGC AGCAGCCATC TTTTCACTAC TTGCTCCATA TTTTGTGCT GATTCGGTTG	8520
TGTTACTTGA AATGGCATTT GAGTAGTGAA TACTTGGGTA GTCGATTCCCT AGACCATTTA	8580
GGAAAGTCTT GCGCGGTTG AGTCCGACCT TGTTTAGAGT TTCCACGGCT GGGACGTTTC	8640
GCGATTGTTG CAGGGCGTAT TGCAAGGTGA TGTTGCCAAA GTAGCCCTTA TCCCAGTTAT	8700
AAACAGGAGT ATTTGTCCCA GGGTAGTTAT AGGGCTCATC GTGAACGATA GTAGCAGTTG	8760
AATCGTAGAC ACCGTACTCC AAGGCAGGAG CATAGTCTGT GATCGGTTTC ATAGTTGATC	8820

977

CCCAGTCGCG GTTTGTTTCT ACTGCTTGGT TAATTCCGAA GGAAACATTA CTTGACTGAT	8880
GGCGTGCTCC TAGCTGGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA	8940
CTTGCAATTC ATCGTCTGGA TAGGCAACGT ATTCGTCTGT ATTGTAAATA TCCCACAGAT	9000
GTTTTTGAGC TTCTTGGTCT ACATTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT	9060
AGCCTGTTTC TTCTTCAACT TGATTGATGA CTTCTTGAG GTAATTATCC ATGTAAGCAG	9120
GGTAATTACT TGCTGATTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT	9180
TCTCATACTG TTCAGCAGAG ATGTAGCCIT GATTTTTCAT TTCAGATAAG ACCAAGTTTC	9240
GGCGGTCTTG GGCTGCTTCT GGATGTGAAT AGGGGTCATA TTGGTTTGGT GCCTGAGGCA	9300
TTCCAGCCAG CAAGGCTAAC TGAGGTAAAC TTAAATTATT GAGGTCTTTA CCATACTAGT	9360
TTTGAGCTGC TGTCTGCATT CCATAGTTCC CATTAGACAT GTAGACCTTA TTTATATAGT	9420
AGGTCAAGAT TTCTTGCTTG GTTGCTTTT GTTCTAACTG AATCGCTAAC CAAGCTTCCT	9480
GAGCCTTACG AGAAATAGTC TGGTCGGAAG TCGAAGTTGA AAAGTAAGTC AACTTAATCA	9540
ACTGTTGGGT GAGAGTTGAT CCACCTTGA GGAATTGCT TTGCAGATTG CGCAAGAAAG	9600
CTCCCAGGAT ACGGATGGTA TCAATCCCC TGTGGTCGAA GAAGCGATGG TCTTCGATAG	9660
AAACGATTGC CTTAACCAA TCTGTGGGAA TATCATTAGC TTGGGCATTG ACGCGCGCTT	9720
CAGAACCCAA GTCAGCAATG AGTTGATTTT TATTGTGTA GATTTTACTA GAAGTTGTTG	9780
CAACTAGTTT ACTCTCGAT AGGCTAGGAG CCTTGCTAAC GTAGTAGAAA AAAACTCCTC	9840
CGCCTAAGAC AATGGCTGCG ATAACCAAGC TTAAGAAGCT AATGCTCAGA TACTTGATTA	9900
GGCGCAGAAT CGTTGGTTTG TTCATCTTGT TTTACCACCT AATAAATGTT CTTTGATAAC	9960
ATTGAGATAA GGAATTGAG GGAAGGCACC AGCCTTGATT TCATATCCAT ATTCTCGAAT	10020
ATATTCAAGT GGCATTGATT TTTGTCCCTT ATCTTGATGA TAGAAGCGAA TCAAATCGAA	10080
TGCCGGCAAT AAGTAGSTTT CTTGCTGAGA AGAAAAGTGA AGAAGGACAA AGCAGATTCC	10140
TTGTTGGGCA AGGACTTGTT CCATATGCTG AATCTGATGT GGATGAAAAT TTTTCATCGG	10200
AATCGCACGT TTTTGTTTTG TTTCCCTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC	10260
GCCAGAATAG TCCGTCGTTG AAGCTTGTCG AAAATAGGCT TCAACAATCT TGGCAGGACT	10320
TCGTTGTGGA TAGTCCACTT GTACGATTTG AATAGGAGTT GGTTCCTTAT GTATAACAGC	10380
CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA	10440
GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT	10500
TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCCT AATGAGTGAG	10560

978

CTAACTCACA TTAATTGCGT TCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG	10620
CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTCGCGTA TTGGGCGCTC	10680
TTCCGCTTCC TCGCTCACTG ACTCGCTGCG C	10711

(2) INFORMATION FOR SEQ ID NO: 146:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11887 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

TACATTCATT CCATCGGCTA CTCCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA	60
CGGATACTGT AAAGTATTAT CAATTTTAAT CAAATCATCA TTACCGATAA TACTTCTGAT	120
TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAATGAAGA ATCATTAGAC	180
TCTGGACCTT TTTCTAGTGT CTCACCTACC TCATATCTT CACCCTTACT AGAAATAACA	240
CTCAAAGCAG ATACTGTCGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA	300
CCCAATTTT TATAAACAGT TTTCTTCATT ATTGTATCCT CCTAATGTAA TTATAGCGTA	360
CTATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTAAATACC	420
CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCAGCT	480
AGAGGTACTT GCTTGCTTCT TTGATACTAA GTTCAGCCAT TCTTTCCTTG TTTTCTCAA	540
TAAAGCATGT TACCCAAGTG GGATTCGTTT TGGAGTAGTC TCGCAGAGTC CAGCCAATGG	600
CTTTATTGAT AAAAAATTCT GTTTGGTTCA AGTTATGAAG GAGAATCTTT TCCATTAAAT	660
GAGTATTGGT CTTCTCTTTT CTTAACAAC TGGTGTCAAT AGCGACACGT CTCAGCCAGA	720
TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAAATCA AAGAGCAAAC TAGGAAGCTA	780
GCCGCAGTTG CTCAAAACAC TGTTTTGAGG TTGCAGATAG AGCTGACGTG GTTTGAAGAG	840
ATTTTCGAAG AGTATTAAGA TTATTTCTTC TAGTTCAGGG TGTTCATACA CCAAACCTCCC	900
TACTACTCGA TCTAGGATAT CTACCGTGTC CCACAAGGAT TTTGTCACGA CTAAGTCTC	960
TAGCTTAGGC AAATCGGTTT CCTTTAGATA AGACTGCATT GCTTTCAAAT AGTTAGCAGC	1020
CACATATGGG TATTTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCAAAAT CCCAATCGAT	1080
AATCTTTGTT TTTTTCGCTT CTGGAATAA TTTTATAGAG TTTATTTCTT TCAGGCACCG	1140
CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTTTAG	1200
AGTCTTTTGC TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCCTCTT	1260

979

GCCCCACCAA ATGGTGCTGA AAGGCATAGA CAGCCGCCTG GGTACGAATCG CTGACTTCAA	1320
GTTTGGCAAG AATATTGGAC ACGTGGGTCT TGACCGTCTT GAGAGAGATA AAGAGGTCAT	1380
CTGCGATGCG CTGATTTTCG TAGCCCTTGG CGATGAGTTG GAGAACATCT CGCTCACGCG	1440
CAGTCAATTC TTCATGAAGT TCCATATGAT TGCCGTGGTA TTCAACCTTC TTGCTAACCT	1500
CTTGCTCAAT GGCCAGCTCG CCAGCAGCTA CCTTACTGAC GGCATGAAGC AATTCATCTG	1560
CACTAGAAGT CTTGAGCATA TAGCCTTTGG CACCAGCATC TAAGACTGGC ATGATTTTTT	1620
CATTGTCCAA ATAAGAGGTC ACAATCAAAA TCTTGGCTTC AGGCCATTCT TTAAGGATTG	1680
CTAAGGTCGC GTCAATCCCA TTCATCTCAG GCATGACAAT ATCCATGACA ATGACATCTG	1740
GACGCAGTTC CAAGGCCAAG TCAATCCCTT GAGACCCGTT GGACGCCCTCA CCCACAACCT	1800
CTACATCGTC TTGGAGGTCA AAGTAGCTTT TCAAGCCCAA TCGGACCATT TCATGGTCAT	1860
CTACTAGTAA AATTTTCATC TTTACTCCTT TATCATTCCT TATCTAACAG GGGAAATACGG	1920
ATATCAACCG CCAGCCCTTG CTTGGGAGCT GTCAAGAGTT GAACTGTTCC AGCCATATCT	1980
TCAACCCGCT CCTTGATATT TCGCAGTCCA TAACTCAAGT CGTCTAAGCT CCCTAACTGG	2040
AAACCAATCC CATTGTCCAC CACCTTCAGT TGCAATTCAA CATCTGTCTG ATAGAGGTAG	2100
ACATCTAGGC AAGATGCCTG GGCATGGCGG AGGGTATTGC TAATCAACTC TTGCAGGATA	2160
CGGAAGATAT GCTCCTCGAT TTTCTTAGGC AATTTCGTCA TATTCTGCTT GAGACTAACC	2220
CTAAGATCAC TCTTGTCTC AAGCTCTTTT AAAAGAATTT GAATCCCTTC TATCAAGCTC	2280
TTCTGTCCCA GTTCAACTGG TCGCAAATGC AAGAGCAAAA CCCGCAAATC CTTCTGGGCT	2340
GTTTCTAAAA TAGCTGTGAC ACTCTGCAAC TGGGTCTGCA TCTTTTCTCT ATCCAATTTC	2400
AAAGCCTGCT GACTGATACC CGATAAAATC ATGTGGGCCG CAAACAATC CTGACTGACT	2460
GTATCGTGCA AATCCCGAGC AATTCGCTTC CGTTCCTTCT CGATGATTTC CTCTTCCTGA	2520
GCAAGGCTCT GATTTTCAGC TTTTGAAGA GCCTCTGTCA AAAGGTTAAG TTTACCTGAT	2580
AAGGACTTGA AACTGGCATC CAAATCTGGA TCTGCAACCT GAACCACTTC TTGCCCTGCT	2640
AATAAACGCT TGAGATTAGC CTGCATTTTT CTTAGAGAAA GCTCTTCGAT CCCTCGCCAA	2700
AACAGGGCTA AGAGACAGGT CATGGACATG CTGAAAACCA ACAATAAAAA GACAAATTTT	2760
TCTGTTTTTT CGACATCGTG CAAAAAGATA GACCAGTCAA AATCAAGTAT TTCCAGCAAG	2820
CTGTGGGAGA AAAAAAGAC AAATAGGAAG GAGGTGAGAG CAATAATCAC ATAGGCTTGT	2880
TTTTTCATCC TCTAACCACC TCCACATCAC CAATCATAGT GGTCAAGAAA ATCTTGACAC	2940
TCTGTTFACT CTTGAGATAG TCTTTTGTTC CTTGATGATA GTGTTTATTG CGGAGGGCTC	3000

980

GCTTGGGCTG GTTGAAAAA ATCAAATCCC CATAGAGACA GTTAACGCTG AGACTGACTT	3060
CCACATCTAC AGGTACGATG ATTTTGGTCG TTCCTACCAT CTTTCTGAGG ATAATGACAT	3120
TGTCATGATG GGTAAAGATG ACCCTCTCCA GATGAATAGT GTCCTTGCCC ATGAAGCGAA	3180
AGAGATTGAT ATCATCGAAT TGGCAAGTCT GGTAGCTTGA AAAATGATGA AGATTTCCAA	3240
ACCAACGATT TTTCTCCTTC TTAACCGTCA CGACCTCTTC AAAAACCAAA TTGGTCTGCT	3300
CTTTTTCCTG GTTCATCATC GGGTAAGAA GAAAGAGGCT ATAGATAACC GCAACAAAA	3360
TAGCTAGAA CACAAAAGGA TTGAGCATAA CGATGAAAA GAAGAGAATG GTTGCCGCTA	3420
CTAAAAGAAG ATTATTTCCC TCTTTACCAG TGTAGTAGCG AATCAAAAGC AAAAAGAGGA	3480
ATAGTATCAG CAGAAAACGC GAAAAATGCT CTGATACCAT CAAAATCAGA GCTCCTGTCA	3540
GAAGACAGGC TTCGATAAAT AAAAAGATTT TAAATTTTCT CATAGGTTCA TCCTCTCCCT	3600
TCTATTTTAT CACAATTCAA AAAAGTCACC TCAGTCTGAG GATGGAAAA AGGCGCTGGT	3660
TACGCCCTTT TCATCTGATC CTTTGCTTCT TTTAATTTTC CATAAAGAAG ATAGTCTACT	3720
TTTTGTAGAT CTGCTATGGT GGCACAGTTA AGGGAACACA TAATCAAGCG TAGATCTGCT	3780
TTCCAGCCTT GGACAATGCC AATCATTCT TCAACTGTGT AGGTTTCAAC CAATCCAGA	3840
ACGGTTCGTG ACAATCCCAC AGCCTTAGCA CCAAAAACCA AGCACTTAAT CATATCCAGC	3900
GGATTCCGAA CCCCTCCACT AACCAAGAGT TCGACCTTAT CTTTCCATTC TTGGGCATTG	3960
AGAAGGGCCT GCATGGTAGA CTGACCCCAT TGATTGAGGT AATCACGCTG GCCACTACGA	4020
CGGTTTTCGA TATAGGCAAA GCTGGTGCCA CCACGACCCG ATAGGTCCAC TGTACGAACA	4080
CCGAATTCAT AGGCTCTTTC GATTGTCTTG GCATCCATTC CAAAGCCAC TTCTTTGAGG	4140
ACAATAGGAA CGGGAATTTG CTGCTATAA TCTGCTAGAT GCGATTGCCA GCTTCTAAAC	4200
TTCTTTCTC CCTCGGCAT GAGTAATTCC TGATGACAT TGACATGCAC TTGCAATAGA	4260
ACAGGATTCA TCTCTTCTAC AGTCTGAAGT CCTAATCGA CAGGCTTGTC CAATCCAATA	4320
TTGTTCCAA GGAGGAGATT GGGATGACTA GACTTGACAG AAAAAGAATC ATCCGTTGGA	4380
TTTTTGAGGG CTGCGCTATA AGAACCCGTT ACAAATAAAA TACCACAGGA TTCCGCCACC	4440
TGAGCCAGCT TTTGATTGAT TTCTCTTCCC TTATTACTTC CACCAGTCAT GGCATTGATA	4500
TAAAAAGGAA AGTCCCACTT TCGACCAGCA AACTCTGTCG AAAGATCGAT TTCATCCAGA	4560
TTGTAAAGAG GCAAGGAAGA ATGAATCAGC TCCACCTCAT CAAAGCTATT ATAGGAACTT	4620
TTCTGCTCAA GGGCATAGAG GATATGCTCG TCCTTACGAT TTGTCGTCAT GTCCTATCCT	4680
TTCTTGATAT AAGAGCTCAA TCCCCAGATC GGCCCAACGA TTTTTTAAGG TTTTGGTTGA	4740
TTGCGCATCA AAATCAGGG CGATGCCACA GTCACCACCA CCAGCACCAC TACTCTTGGC	4800

981

AACGGTCTGC	AAATCTTGAC	TGGCTTCTTT	CAACTGTCTA	AGCAAAGGCG	TGTAATATC	4860
TGTACTCAAG	CCTTCTAAAA	GCTTGCTGGC	TACTTCTACT	TGATCGATAA	TCTTTTCTGA	4920
TTTCCCCTGT	TCCAAGGCTT	CTACCAGAGA	AGTCACCGTT	TCTTTTGAGG	AAGTTAAAAA	4980
ATTTTGATTG	ATATTTTGCT	TGATTTGCTG	GACCATGTGA	CTCGATACAG	CCACTTCCTT	5040
GGTCCATCCC	ACTAAGAAAT	CACATTCTAA	AGTTGGTTTC	ACTTGTGAAA	TTGAAAAGCC	5100
CCAATCACGC	TCCAGAACTG	TCGCCAAGTT	TTCTTCTTCT	AACCAAGCAG	CCACCTTCTG	5160
GCGATCAAA	GACTGGTAGA	GAACCAAATC	CTCTGCCACA	ATACAGGCAA	GGTCGCCCAT	5220
GGAACCATTG	TCTCCTCGCT	TAAGCAAGAC	AGCGCTAGTC	AGCTTGAACA	AGAGCTCCTG	5280
ATCAACAGAA	ACATCATACA	GAGCCAGTAA	AGCCTTGACA	ACCAAGACAA	CGACGCTGCC	5340
ACTAGAACCT	AGACCAACT	TTTTCCCTTC	TCGTTCCATT	TTGCCACAGA	TTTCTAGAGA	5400
AAAAGGTCTT	AAATCTGAC	CACGAACAGC	GAGGAAGTCT	CCCATCAAAG	CAATCGTTTC	5460
TTGAATCAAG	CTATAGTCAG	GATTAGGCCT	TAAGTCCACT	GCGAAATCAA	ACATATCTGA	5520
ATAGATACGG	TAGCTGTCAG	AAAAAGCAAT	CTCAGCCCTC	ATATAGATGG	GAATATCCTT	5580
TATCAAAGCT	AAC TGCCCTG	GCTCTAAAAT	AGCATATTCA	CCTGCCCAAT	AGAGTTTTC	5640
GCAAGTTTTA	ACAGCAATCA	TCTTGACTCA	AATCCTTTGT	TTT TGACACA	ATCAAGCGAT	5700
AACGATGACC	GAAAATTTCT	GATAAATGCT	CCAAGTCTTT	CTCCTGACAG	AAGACCTTAA	5760
CATTGGGACC	AGCATCCATG	GTAAGTAGC	AGGCCTCTCC	TTTCTCACGA	AGCTGGCGAA	5820
CAAAGGCCAT	AGCCTCATAA	GAGGCATCCG	TCAGATAAGA	AAAGGCTGGA	CTAGCAGTCT	5880
TTGTCGTAGC	ATGCATAGCC	AGGGCATTTT	TCTCCGTTAA	TTCTCCAATC	TTGGCAAAAT	5940
CATTTTCCTT	GAGATAAATC	AGCATATCCT	GATAGTCCTT	CTCAGACTGA	CGAACCCAGT	6000
CGTCGAAAGT	CGTCGAGGTT	TCCACACAAA	GTTTCATCCC	GTCACGGCTA	GAGATTGGTT	6060
TTTTCTTGTC	CTCTAGCACC	AACATAATCA	TAGCTAGTTT	CAAGTCTCTC	TCTACAGGGT	6120
AAATTTCTCC	ACTATCCTTA	TCCCAGGCTC	CTAGTGGTCC	ATAAAAATC	CGAGAAGAAG	6180
AACCTGAGGC	AAATTTGGCT	TCCTGTGCCA	ACTGACTTCT	ATCCAATCCA	AGCTTGAAAT	6240
AAGCATTACA	AGCCTTGACC	AGGGCCGACA	AACCACTAGA	ACTTGAGGAC	AGACCCGCTG	6300
CCGTAGGCAT	ATTGTTTGA	GATCGATAC	GGACAAAGCC	CTCACCAGCT	GGACGATAAC	6360
GGTCAATAAT	CTTACTCATC	TTGGCATGCT	CGACCTCATT	TTGTAGCTGA	CCATTGATGT	6420
AAAATTCGTC	AGCTGTTACA	TTGGCTGGTA	AAGGCACAA	GGTCGTCTCT	GTATACATAT	6480
TTTCCAAAGT	TAGAGAAATA	CTGCTAGTAG	CAGGCACCAT	CTCTTTTCT	TTTTTCTTTC	6540

982

CCCAATATTT GATAATAGCA ATATTTGCGT AGGAACGTAC TGTACAGGC TCTCTATCCA	6600
TGTCTGAACA GCTCCTTTCT CTTCCTAATCT TTCTGCTAGT TCTTGTCGT GTGTCAAATT	6660
GGTTACCAAG GCTATGATAC AACCTCCTAG CCCACCACCG CTCATCTTGG CACCCAGAGC	6720
ACCATGGCTA AGAGTCGTTT CAACCAAAAA GTCTGCCTCA GGGCTACTGA CTCCAATTTC	6780
TTTTAAATGT AAATGCGCTT GACTGAGGAT TTGTCCCAGT CCTTCAGCAT CTTTTGTGA	6840
AATCGCAACT TCTGCTTGCT GGGTTAATTC TCCCAAGGCA TGCAAAAACG GTAGGGCATC	6900
CTTGCCCTTA TTTTGAACCA CTTGGATGGC TTCACGAGTA TGACCATAAA CACCCGTATC	6960
GGCAATCACC AAATAGGCGG ATAAATCCAT CTCAAGTTCT GTAAATCCTA CGTTCCTGAT	7020
AAAGCGAATA GGTGTCAC TAAGACAGGT CTTAGCATCC AAACCACTAG GATTCATATG	7080
GGCAATCATT TCAGCTCGAT TGACCAAGAT TTCTAGTACA TCATGAGGCA GATCAGCCTG	7140
ATAGTAGTCA AATACTGCAC GAATGGCCGC TATGCTGATA GCCGCTGACG AACCCATCCC	7200
CCGTTTCTCA GGGATAGCCG AGTCAATCTC ACAACGAATG CAGGCTTCTG TGATATTCAA	7260
ATACTCCAGT GAGGCATAAA CCGCCATGGA CAAGGTATCC TCCTCATAAA GCGGCCAAGG	7320
ACTCTCTGCA GGAACCTACCT TACAGGTCAC CTCCACCTCC AAAAGAGGCA GGGAAATGGC	7380
AGGATAACCG TAAACGACCG CATGTTCCCC TATTAAAAAT ATCTTACTAT GTGCCTGACC	7440
GACACCAACT TTTTTGTCA TTTTTTCCTT TTAGTAGACG AAAAAACGTC TTATTTTTCA	7500
TACAAGTATT AATTCCTTCC TATCTATTTT ATTATATTTT CACAAAAAAA GCGATTGTTT	7560
CCATTCACAA TCGCTTCTTT CATTATTGAA CCCATTGCCC ATTATAGTTG ACAGAATAGC	7620
CATCTACGGT CGTATTCACT GCCAAGGCAC CTGAGCGCTA TAAGCGTAGT ACCATCTGCC	7680
ATTGACCTGG AACCAACCTG TCGTCATAGA ACGACGAAAG AAACCTCCATA CCATTAAGTA	7740
AAGAGGAAAG TCGTGAGGGA GCATGCGCCA TTGACAACCT GTTTTAGTGA CGTACAAAGT	7800
CTCATTAACA AGTACTCGTT TCGGCCATTT ATAGGTGCGG TGTTTGGAGA AATAGGGTTC	7860
AATCTTCGCC CATTCTTGAT CGTTTAAATC AGTATCATAT GCTTTGCGTA TCATAACTCT	7920
AGCTTAACAT TTTTTGTGA ATACAGGTTT TAAATAATCG ACCACGAAAA TTCTTTAAGT	7980
GGAAAAAGCC TTATGAAGTA TGCTACGGGA AAGTTATGCA CTTAATTGTA CAATTCAAGA	8040
TGTAAAAATA TATACTATAG TAGATTGAAA CTAGAATAGT ACACCTCTAC TTCTAAAATA	8100
TTGTTAGAAA TCGATTGAC TGTCCCTGATC GATTATCCT GTTATTATCT CATTTTACTA	8160
TAATATTTGA TAAGTTATCC TAAAAGTATT ATTATGTTGT TGTGTTATAG ATTGATTGAA	8220
TCTAACTAAA GGATCCTATT CAATTACTAG AACTATCACA TACTCAAGGT CAGCTCACAG	8280
ATGAGCAACT ATTTTGTTA CAATGTCTAC TAAATTTAAG TCAAACAAAT AATTTAGTCA	8340

983

AAATTAAAA	AATAGAGGAA	CATAAATATG	ATTACAAAAC	AGAAATGTAAT	AGTGTCTCTAC	8400
AATTTTACT	AGATAAACT	GTAAATCTG	AAGGAAGGAT	CACTTCTTCA	ACAGAATTTG	8460
GAAATTTCTG	AAGTAATTTA	TCATTCCAAC	ACGGAATAGC	TGGACTACTG	TTTCCTCTAA	8520
ATAAATTGTA	CCCCCAGAA	CTGGATTCTA	AAATACTCTC	TATCATCAAG	AAGGCAGTGA	8580
CAATTAGAAC	GACACACACA	TATGAATATC	AATACTCACT	GCTATTTGGT	GATGCAGGCT	8640
ATCTATGGTT	ACTCCTACAT	TTATTTTCTA	TCAGTAAAAA	TCAATACTAT	CTACAATTAG	8700
CAAACGTCAC	CGCTAAAAA	TTAATAGAGA	ATTATGATAC	TCTAGAGGAA	ATAGACTTTG	8760
CATTGGGAAA	ATCTGGTGTC	CTATTATCAT	TAATAAAATA	CTATCAATTT	ACCAATGACA	8820
ATACTCTTAA	AATTTTCATC	CACAATAGTA	TAGGGGAAAT	TTATCATTAT	TTCTACAAA	8880
GAGATACAGC	CAAAGAAAGC	ATTTTAGACT	ATAGCTTTGC	TCATGGATAT	TGTGGAATTG	8940
CATATGCTTT	ATTTGCCTAT	TCTAAAGTCT	TAGAACCTTC	TATGTTTTAT	AATGATCTCC	9000
ATACATTCCA	TACTGAATTA	AAAAAATTAT	TAGAAAAAGT	TACTTCTAAT	ACTGAAAATT	9060
TAGGAAATTT	ACAACCTTCT	TGGTGCAAAG	GAATTTCCGG	AATAATCTTA	TATCTTTGTA	9120
TGTACGATTG	TGACGGAAAC	AAAGATATTA	TTAGTAAATA	TCAAGAATTT	GTTTTTAACC	9180
ATCATCTAAA	AATGATGACA	GGATATTGCC	ACGGAATAAC	TAGCTTACTA	CAAACCACTG	9240
TCTACAATCA	AAACAAATTA	CTGATGAAAA	AAATCCAACA	GGTAATTTTA	GCATGTTCTG	9300
AACGAGATGA	TCACGGTTTA	CTGATGTTTC	AAGGAGATAG	TGCTAAAGCA	GATTTGTTTG	9360
ACTTCGGAAT	AGGAAGCATG	GGGTATATTG	GTGCTATTA	AATAATAAAT	TCCCATTCTGA	9420
TGTGCAGACA	TAAGGAGAAA	AGTATGAAAT	TATTTTGGAC	AAACAACATA	TATAGACAGT	9480
TGCTGCTAAA	CAGCTGTTTT	TCATCATTCG	GCGACAGTAT	TTTCTACCTC	GCCATTATCA	9540
ATTATGTGGC	TCAGTACAAT	TTCGCTCCGC	TAGCGATTTT	ACTGATTTCC	ATTTCAGAGA	9600
TGGTTCCCCT	ACTATCGCAA	CTCTTTCTCG	GGATTCTAGG	AGATTTTCAA	GAAAAATAGAG	9660
TCAAACACGC	ACTCTGGATT	GCCAAAATCA	AAATCCTGCT	CTACGCTATT	TTGACAGTAT	9720
TTCTCGTCTT	GTCGCCCTTT	TCATTAGTTT	CAGTCATTAT	GATTGTCATC	ATCAACCTCA	9780
TCTCTGACAC	CTTGAGCTAC	CTGTCTGCCT	ACATGATGAA	CGCCCTCTAC	ATCAGTGTA	9840
TTAAGGACGA	CCTGCATGAT	GCCATGGGGT	TCAGGCAGTC	TCTGATGAGG	GTTGTCCGTA	9900
TTGTCGCCAA	TCTGGCTGGC	GCATTCCTTA	TCAATGTTAT	AAGTATTCAA	ACTATTTCCC	9960
TTATCAACAC	TCTGACTTTT	GTCATTGCCT	TTTGGGCCT	GTATGTTATT	CGACATACCT	10020
TGTATGAGGT	TGAAAAAGA	ATTGAAATGT	CACATACAGC	ACTGAGTTTT	AAGAAATATT	10080

984

TTCAACATCT TAAACAGTCG CTGGCTGTGC TCCTGAGGTT AAAAGATACC GTCATACTAC	10140
TGTTTCTGAC GACCAGTATG ATTGCCATCT TGGATGTGTC CCCTCGGCTG ATTGCCCTCC	10200
GCTTCATCCA ACAGACACTA GCACAACTGA GCATTGGGCA ACTCCTCGCC CTGCTCTCCA	10260
TCATCATGTC TTGTGGAGCT ATCCTTGGCA ATATGACCAG CAGTAATCTA TTTAAAAATA	10320
TCCGTTTCAC GCACCTCTTG GTTTTCTGTG AGATTTCCTT ATTGACTCTA ATAAC TAGTA	10380
TCCTTTGTCA AGCCTATATC GTAATTTTCA TGACCAGTTT CATCAGTTCT ACGATTATCG	10440
GCATTCTCAG CCCTCGCCTA CAAGCAGCTG TCTTTGCCCA TATCCCCAGT GACAAGATGG	10500
GGACGGTGGG CTCTGCTCTG AGCACAGTGG ACATTCTCGC CCCGTCCCTG CTCTCCCTAT	10560
TAGCCCTATC CATAGCATCG GCGTTCGCG TGCAGTTAGC ATTGATATTT TTGTATCTTA	10620
TTTTAATTGC TCTTATCTTT TGTCATGGT TAGTCAAGTT CAACACTCAT AACTAACGAA	10680
AAAGCATGTG TAGATTTTAC ATGCTTTTAA TCTCCCCAAT CGTCAGGTCA AGTACAACAA	10740
AGTCACTTCT TTGATTAAGC GAGTGTCTA ATATAATTAT AAGCGCCCTG TCATTACCGA	10800
ACCCATTTCG CATTATAGTT GACAGAATAG CCATCTACGG TCGTATTCAC TGCCAAAGCA	10860
CCTGAGCTAT AAGCATAGTA CCAGTTGCCA TTGACCTGGA ACCAACCTGT CTTCATGTCT	10920
CCATTACCTG CATTTAGGTA GTACCAAGTT GAACCATCTT GATACCAACC AGTTGCCATA	10980
GCTCCTGATG AACGGAGATA GTACCATTG TTCCCAAGGT TTTGCCAACC TGTTTTCATA	11040
TCGCCATTTG GGTGTCTAA ATAATACCAA GTGGTACCTT CCTGATACCA GCCAGTGGCC	11100
ATTGCTCCTG AGGAACGGAG GTAGTACCAC TTATTACCTA GATATTGCCA ACCTGTTTGC	11160
ATAATACCAG TTGTGGATC TAGGTAGTAC CAAGTCGAAT CATCGTTTAT CCACCCCGCA	11220
CGTCTTTCAC CACCAAGGTA GTTTTCTCCA TTAATTTCCG TCTTAGCTAG ATAATACCAG	11280
TTAGACTGAT CATAAAGCCA ACCTGTCTCT AAAGAATGAT TTTGATTAAA GTAATAGTTC	11340
GTATAATAAC GCTTCTCTTC TTTATCTTCT GAATCTTCAC GTTTTTCCTT GACTTTCTT	11400
CCAACACTGT CTTTAGTTT AATCTCTAAT GTTTTCCAAC CAACAACTC TTGTAGCACT	11460
CCATTTTAT CGAAGTAGTA CCACTCTGAC TTTGGAAAAC CTTCTAATCT GATACCATTT	11520
GGGTAAGGAC CAATTGTA CTCTTAGAT GGAAACGGGA TATATTGCCA GCCGACAACC	11580
ATCTCTCCAG ATAGAGAATC AAAATAATAG TACTTACCAT CAATCACTCG CCAGTAGGTT	11640
TCTTTGAGGT CCCCTTTT GTAGTAGGTT CTTCCGTTT CTTGGACAAA CTGCCATCCT	11700
TCAGAAATCAT CTGCAAATAC TGACTGGTC CCTAGCAAAC CAAAGAAAA TACTGTCAGT	11760
CCAACTTGCA TAGTTTTT CAAAAATTC ATCTATATAC CCTCCAATAT TAAATCCACT	11820
CACCAGATGA GCGAAATTA TAACTTTTAC CATCGATAGT TTGGCTACCT GTAACCATTC	11880

985

CTCCAGG

11887

(2) INFORMATION FOR SEQ ID NO: 147:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

CCGGTATGTT CTGGAATACT ACCAATCTAA GCTGGCTGTG CCCTACAGTT TTACAACCCT	60
GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTTGGAGT CTGGTATTTT	120
AAACGCTGAT AAAATATCCG ATATTCCTTT ATCAGTTTTC GAAAATATGT CTAAGAAAGA	180
CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA	240
ACAAGGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACTTTCTA GTCTTTACAA	300
GTATCTAACC GAGGAGGTG AAAACGATCA GGGGGAACCT TATTTCCTATC GTAATGTAAT	360
GAAAAAAGTT TCCACCAAGA AAAAGAAAGA AACCCCTGCT GCCAGAGCTG AAAATATCAA	420
GCAAAAACCT TTTCTAGGTG ATGAAACAGA AGGTTTCTA ACTTATATCG ATCAAGAGCA	480
CCCACAACAG CTTTCAAATC GAGCTCTCTC ATCATTCAAC AAAAATAAAG AACGAGATTT	540
AGCCATTATT GCCCTTCTCT TGGCATCTCG TGTTCGCTTA TCTGAAGCTG TTAATCTAGA	600
TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAAACG	660
TGACTCAGTC AATGTCGCTG CTTTGTCTAA ACCTTATTTA GAGAATTATC TGGCCATTCC	720
GAATCAACGC TATAAAACGG AAAAAACAGA TACAGCCCTT TTTTAACTC TCTACAGAGG	780
TGTTCTTAAT CGTATCGATG CTTCTAGCGT TGAGAAAATG GTTGCTAAAT ACTCAGAGGA	840
TTTTAAAGTG CGTGTAACAC CCCATAAACT GCGCCATACA CTAGCAACTA GGCTCTATGA	900
TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC	960
TGACCTCTAT ACCCATATTG TTAGTGATGA ACAAAGAAT GCTCTGGATA GTTTATGATT	1020
TTACGTATTT TAAATTATGT AAATAAATAT CAAAAAAGA AGTTGGCCAA CTTCTTTTGT	1080
ATTTATCCAA CTACCGCTTC AGCGATTTCT TCACGGCTAA TACCAGCGAA GTAGCGTGTG	1140
ATATCAATGG TTTTTCGCGC CTTAAGAACA TCTTCGCGTT CGTATTTTAC CCCACGAAGG	1200
ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAGAAGT CACCATAAAT CTTGATGTCT	1260
TGGATTTTGT ATTCAGTAAC GTTAGCAAAG ACTTCAACCT TACCACTAGT GAATTTGATT	1320

986

CCACGACGGA CGTTAAATTC AGGTGATTTA CCATAGTTCC AGTCCCAAGT TCCAAACTTA	1380
GTATCCTTGA TGCATTGAT TCGGCCAAT TCTTCTCTG AAAAGACGTA TTCAGTCATC	1440
TCTGGGTACT CTTTTTTCAT GTATTCCAAG AGTAAATCAC GGAATTTTTC GACTGTGATT	1500
TTTTTTGGTA ATTCATTGAT AATATTGGTT ACACGGGCAC GGACGGATTT CACACCTTTT	1560
GATTCAAATT TATCTTTTGA AACCTTAAGG GCATTTGCGA GGACTGACAA ATCAACGTCA	1620
AAGAGCAAGC AACCGTGGTG CATGATACGG CCGTTGATAT AGGCTTGGGC ATTGCCACAG	1680
AACTTCTTAC CATCAATCTC AAGGTCATTA CGACCTGTGA ACTCAGCTTT AACCCCAAGT	1740
TGAGCCAGGG TATTGATAAC CGGAGTTGAG AAGCTCTTGA AGTCAAATGC CTTATTTTCA	1800
TCTTCTTTGG AGATGATCGT GTAGTTGAGG TTATTTAAAT CGTGGTAAAC AGCTCCACCA	1860
CCACTAATAC GGCGAACTAC CTCGAATACCA TTTTCGCGAA CATAATCACG GTTGATTTCT	1920
TCGATAGTGT TCTGGTGACG ACCAACAATG ATAGATGGCT TGTTAATCCA AAGTAGGAAG	1980
ATTTGATCCT CATCCAAAAG GTGTTTAAAG GCGTATTTCT CCAAGGCAAT ATTAAAAGCA	2040
GTGTCATTTG AATGATTGAT AATGTATTTT ATGATATCCC TTTACTTTAT ATGATAGAAA	2100
CTGGAATAA CCTTCCAGTC TAATCTATCT TCGTTTTATT TTTTCTTAGG TGAATGGATG	2160
GCCATTCCCTA GAACATCTGC AAACGCTTCG TACATCACTT CAGAGTAAGT TGGGTGCCCC	2220
TGCATGGTCT TCAGCATTTT CTCAACAGTG ATTTCCATTT CGATGATGCT TGATGCTTCG	2280
TTTATTAATT CTGCGGCTGC AGGACCAATA ATGTGTACAC CAAGGATTTT TCCGTATTTT	2340
TTATCAGCGA TAACTTTTAC GAAACCTTGA GCTGCGTCAG ATGCAATAGC ACGACCGTTA	2400
GCAGCAAAGT TAAACTTACC GATGGCAACA TCGTATTTCT CACGGGCTTG TTCTTCTGTC	2460
AAACCTACTG CTGCTACTTC AGGGAGAGTG TAGATGGCTG CAGGAGTCAA ATTCAATTTG	2520
GCAACTGCAT GATTTCCCTT AAGGGCATTT TCAGCGGAAA CTTCACCCAT GCGGAAAGCT	2580
GCGTGAGCCA ACATCTTAGT ACCGTTGATG TCACCTGGTG CATAAATGCC TGGAACTGAA	2640
GTTTCCATGT ATTGTTGAC CTTGATACAA CCACGATCCA ATTCAACTC AACCTCTCA	2700
ATACCTTCAA GGTCTGGCAT ACGACCAATT GAAAGAAGAG CTTTGCTTGC GATGATATCG	2760
TCTTTTCCTT CAACCTTGAT ACGAAGTTGA CCATTTTCCT CAATGATTTT TTGCAGTTTA	2820
GTACCAGTCA AGATGGTCAT TCCTTTACGC TCAAGAATCA AGCGAAGGTT CTTAGAACT	2880
TCCACATCCA TAGCTGGAAC TATACGGTCC ATCATTTTCA TAACAGTCAC TTTTGAACCA	2940
AATGTATGA AGGCCTGACC GAGTTCGATA CCGACAATC CACCACCGAT GATAACAAGG	3000
CTTCTGGCA CTTGTTTCTT TTCAAGAATG TCATCACTAG TCATGACAAG TGGAGATTCC	3060
ATACCAGGGA CGTTGATCTT GTTGACTTTT GAACCACCAG CAAGAATGAT TTTCTTGCTT	3120

987

TCAAGCAATT CAGAACCATT TACCAAGACG TTCTTGTCTT TAGTGATTGT ACCAATTCCT	3180
TTATGAACAG TAACTCCGTA GCTACGAAGA AGTCCTGCAA CACCACCAAC AAGAGTATTA	3240
ACAACCTTAG ATTTAGTTTC TAAAAGTTTT TCCATATCAA CAGTGAAGTT AGGATTTTCA	3300
ATCACGATAC CACGATTTGC AGCATGACCG ATATTTTCAA TAATTTTCAGC GTTATGAAGG	3360
TAGGTCTTGG TTGGAATACA TCCACGGTTT AAGCAGGTTC CACCAAGTTC AGATTTCTCA	3420
ACAAGGGCAA CCTTACCGCC GAATTGGGCA GCTTTAATGG CTGCAACATA ACCAGCAGGA	3480
CCTCCACCAA TCACAACGAT ATCAAAAGCA TCATCGCTCT TACCATCATC GTTTGAGGTA	3540
CTTGCTACAG GTACAGGGCT AGCTTCTGGC GATGCTGCTC CAGCTGTTGG GATGTTTTCC	3600
CTTCTTTCAC CAAGGTAACC GATAACTTCC GTTACAGGGA CAGTTTCACC ATCTCCTTTG	3660
AGAATGGCAA TCAAGTACCC ATCTTCTTCG GCTTCCAATT CCATGCTGAC TTTATCAGTC	3720
ATGATTTCCA AAAGGATTTC TCCTTCTTTT ACAAATTCCTC CGACTTTTTT ATTCCATTGG	3780
ACGATTTGTC CTTCTGTCAT ATCCACGCCG GCTTTTGGCA TAATTACTTC TAAGGCCATG	3840
TCTTCCTTCC TTTATCTATA TCTTAAAAAT GAATACTCTT GCTCTTAAAT TAACATTGAG	3900
ATTGGCGTTT CAATCAACTC TTTCAAGTCC TTCATAAACT TAGCACCAGC CATACCATCT	3960
ACGACACGGT GGTCAATGGT TAATCCTAAA CTCATGATTG GCGCAATCAC AATTTACCA	4020
TTGACGACAA CTGGCTTCTC GATTGTCGAA CTGACACCAA GGATAGCTGA GTTGGGTTGG	4080
TTAATAATCG GACCAAAGGA CTGAACACCA AACATTCCCA AATTACTGAT TGTGAATGTT	4140
GAATTTTGTA ACTCACTTGG AGCCAATTTA CCATCCAAGG TACGGCCAAT AACATCCTTA	4200
AAGGCTACAA CCAGTTCTGA AAGACTCATC TTCTCAGCAT TGTAAACAAC AGGTGTCATC	4260
AATCCATTAT CCATCCCAAC TGCCATGGCA AGATTGACAT AGTTGTGAGT GATAATAGTC	4320
TTGCCATCTT CTGTCAATGA AGCGTTGATG TATGGGTGTT TCATAAGAGT CTTAACAAC	4380
GCAAGCGAAA GAAGTCTGT TACAGTAGTC TTCTTCCCAG TTGCTTCCAT GATTGGCTCA	4440
AGAACCCTCT TACGAAGAGC CAACATTTCA GTCATATCAA CTTCATAGTT GAGGGTGAAG	4500
GTGGCGCAG TCAAGTAAGA TTCAACCATG CGTTGGGCAA TAACCTTACG CATTGGTGTC	4560
ATTGGAATAC GCTCGATTTT ACCATATGGT GTTACGTTAT CAGGGACTTC TTCCACTTTT	4620
TCAATCTGAG CAGGAGATTT GATGCTATCG TTTTCGATAT TTTCAGGAAG CAGGGCCAAA	4680
ACATCCTTCT TCATGATTTT ACCACGATGA CCGGTTCTTT GGATTTCTCTG CCAAGCAATG	4740
TTATGTTTCA GGGCAATTCG TTTTGCAAGT GCGGAAATGC GAACCACGTT TGTGTCTTTA	4800
TAAGTTTCCA CGTCTTCTTT GTGGACACGA CCGTTTGCAC CTGAGCCAGA AACGTCGTAG	4860

988

AGGTTTATCC CTAAATCATC CGCTAACTTT CTAGCTGCAG GAGTCGCTCT TAGCTTGTC	4920
TCAGCCATGA CCTCTCCAAT TCTATTTATG ATACAAAGGG CGTCAAAAGC GACTGAAAA	4980
TAGGAAATCG ACGATGGCTT CGATGAAGCC AAGGAGATT ATCTTTTTC CGATCTTTA	5040
GCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT	5100
TTCTCGTCAG CTTTATTTA TTTACATAAC TTATCTTATG TAACCTATT CTTGTATA	5160
AGTTTTCGG ATTGCATCTT TGATACTTC AACTGTTGGA ATCATTCAT TTTCTAGGT	5220
TTGTGCATAA GGCATCGGCA CATCTTCTCC TGCACAACGG CGAATTGGTG CATCTAGATA	5280
GTCAAATGCT TCTGATTCTG AAATAATAGC TGAAATTTCA CCGATATAGC CACTTGTTT	5340
GTGGGCATCG TTGACCAGAA CAACCTTACC AGTCTTCTC ACTGAGTTA TGATGATATC	5400
CTTATCAAGC GGAACAAGGG TACGTGGTC AACAAATTTCA ACTGAAATC CTTCTTCTGC	5460
TAATCTTCA GCAGCTTGAA CCACACGGCG AAGCATTTT CCATAAGTAA CAACTGTAC	5520
ATCCGTTTCT TGGCGTTGA TTTACCAAC CCCAAGTGA ATTGTGTAGT CTGGATCAAC	5580
TGGCACTTCC CCTTTTGGT TAAATCTGA CTTGTACTCA AGTATAATAA CTGGGTGTT	5640
ATCACGGATA GAAGACTTAA GCAGGCCTTT CATGTCCGCA GGTGTTCAG GTGCCAAC	5700
CTTAAGTCCT GGAATGTGAG TAAACCAAGA CTCTAGAGAT TGTGAGTGCT GGGCGGAGA	5760
GCCAACTCCG TTACCAGCTG CACAACGAAC AGTCATTGGA ACCTGACCTT TACCACCAA	5820
CATGTAACGT GTTTTAGCAG CTTGGTTGAC GATATTGTCC ATGGCAATAA CAGAGAAGTC	5880
CATGAAGGTC ATATCGACGA TTGGACGAAG TCCTGTCATG GCTGCTCCTG CTGCTGCTCC	5940
AGAGATGGCA GCTTCAGAAA TCGGACAGTC ACGGACACGT TCTGGACCAA ATTCTTCAAG	6000
CATTCCAACA GAAGTACCGA AGTCTCCTCC GAAGACACCG ACGTCTTCTC CCATCAAGAA	6060
CACATTTTCA TCGCGACGCA TTTCTCAGA CATAGCAAGG ATAATGGTGT CACGGAAGGA	6120
CATTGTTTTT GTTTCCATTT TATCTCTTTC TCCTTAGTCT GCGTAAATAT CTTCAAAGGC	6180
TGATTCAAGC GGTGGGAATG GCCTTTCCTC TGCAAATTTA ACAGAAGCTT CTA CTGCTTC	6240
CTTTACTTGC GCTTGGATT CTTCCAATTC TTCGGCACTT GCAATGTTAT TTCAATAAG	6300
GTAATTGCGG AGGTTTTCGA TTGGATCTTT TTGTTTCCAC AATTCCACTT CTTACGCGT	6360
ACGATATTTA CCAGGGTCAG ATGATGAGTG ACCGAGCCAG CGATAAGTTA CACTTTCAAT	6420
CAAGACTGGA CCATTGCCAC TGCGAACATG GTCCACAGCT TTCTGAAATC CTTCATAGAC	6480
ATCGATGACA TTGTTACCGT CTTGATGAA CATTCAGGA ATTCCATAAG CGGCGCTACG	6540
TTGATGGATA TGTTCTATAT TGGTCATTTT CTTGATATCC GCAGAGATAC CGTAACCGTT	6600
GTTAATGCAA TAGAAAATGA CTGGCAGGTT CCAGATAGAA GCCATGTTCA CTGCTTCGTG	6660

989

GAAACACCT TCATTGGTCG CACCATCTCC AAAGAAGCAG ACAACGATT TACCGGTATT	6720
TTGCATTTGC TGACTGAGGG CTGCACCGAC AGCGATCCCC ATACCACCAC CTACGATACC	6780
ATTGGCACCA AGGTTCCCAG CATCAAGGTC AGCGATATGC ATAGATCCAC CTTCCCTTT	6840
ACAGGTTCCTA GTGTATTAC CAAGGATTTC AGCCATCAT T CCGTTGAGGT CAATCCCTTT	6900
AGCAATAGCT TGCCCGTGTC CACGGTGGTT TGAGGTAATC AGATCATCTG GATTGAGAGC	6960
TAACATAGCC CCCACGTTAG CTGCCTCTTC ACCAACAGAA AAGTGGCTCA TTCCTGGCAC	7020
TTCCCTTTTC TTTACTAATT GTGCAATTTT TAAGTCCATG CGACGGATTT CTTCATCTT	7080
ACGGAACATT TCTAGCAAAA GATTTTATC TAAAGTTGAC ATCTTCTTGC CTTTCTAACT	7140
TTCTTCTTAC CTTACTATTT TACCGCTTTT GGCAAATACT GTCAAAGTTT TTCTAAAAGA	7200
AATTTACAAA AATAAAAAAG AAAACCCCGT GAAAACAAGG GATTTTCTTG TCAAGAATAT	7260
TTTTTCACAA ACTTTTTAGC ATTTGGATT T TGCTAAAGAT TCAAATCTCT TCATAATCAC	7320
AGTTAAACGC CAACGGTAGA GCGCCCCGCT CACAATCAAA CTAATAATCA AGCCGATCCA	7380
GTAAGAATAA GCTCCAAAAT CTGTTAGGGA ATCAAATAGC GTATCACAGG GATTGCTACG	7440
CCCCAATAAC CAAGCAAACC AAGGTAAAA GGAATAACTG TATCCTTATA CCCCCGAAA	7500
ATTCCTTGAA GCGGCGCCGC AAAGGTATCT GCTAACTGGA AGAAAAGACT ATAAGTTAAA	7560
AAACGCACTG TCAAAATCGAT AAATTTTGGG TCGTTACCAT AAAGACTGGC CACATTTCCC	7620
CTAAAAATGT AAAGGAAGGT TAAGGTGAAG GCCGCAAAA TGAGGGCAGT CCATCTTCCT	7680
AGACCAATAT AGGTTTTCGC ATCATCAAA CGCTTGGCTC CCACTTCATA GGAAACGACA	7740
ATAGCCATAG CCGATGAGAT ACTCATAGGA AAGGCGTACA TAAGACTTGA AAAGTTCATA	7800
GCTGACTGGT GACTAGCTAT AATCAAGGGC GAAAACCTAG CCATAATCAA GCCAACCCT	7860
GAAAAGATAG CCACTTCCGC GAAGACAGTT CCCCATAAG GCAGACCTAA ACGAACTCCT	7920
TCCTTAATTT TATCCATATT AAGTGAATT CGTTTCTCAA GGTGTAAGGC TTTGAGCTTC	7980
TCCTGTTTAA ATAAAACCAG AACAGAAATC CCAAGCAAGA CCCAGTAGGC CAAGGATGTT	8040
CCTAAACCAG CACCAGCCCC TCCCAGTTCT GGAACACCAA AGGCACCGTA AATCAAGAGA	8100
TAGTTAAATC CGCTATTGAG AGGGAGTAAC AAAAGCATGA GGTACATGGA CAGTTTGGTC	8160
AAGCCCAGCG AATCCAGCAA GGAACGAATG ACGCTAAAGA GCAACAAGGG GATAATCCCG	8220
ATAGATAAAA ACCAAAGATA GCGAACCGCT ACTGCCGCTA CTGCTGCTTC TAACCAATA	8280
TGATTCAGAA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAC AGATAGGCCC	8340
AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCCCTTTT GCCTCGACCA	8400

990

AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAATCC CTGTTAGAAA TGTAAGAAAA	8460
GGATTCCAGA TACTGGTTGC CATAGATACA CCAGCCAAGT CCATAGTGTT GTATTGACCT	8520
GTCATTGCAG TATCAACAAA AGAGGCAGAA TAATTGGCAA ATTGGTAGAT CAGGATTGGG	8580
AAGAAAATTT TTAATAATAA TACTAACTTC TCTCGTAAAC ACTTTGTCTT ATACATACTT	8640
CTCTTTCTAT TCTGATTTAT CTAAACCAA GAGTTTCAGA CCATAGTTT TCAAACCTAG	8700
CGGAGGTTTA TTAGATTTTG AAGTAGTAG CCAACACGCA CATGTACGAC AATAATAGCT	8760
TCTAACTAAA CTTCCGTTAT CATATTGAAC CGCATGGTCA GCTTTTCTT TAGTTTCATA	8820
TTGAATTTTG GAACGATTAG CTGCGGGACA GTAAATTCCA CTATTAGATT TCGCTTGCT	8880
CTCCCTACGT TTTCGAAAAT AATTCATATT CTAACCTTA TCAAGCTGA TAGACGATTT	8940
GTCCCTTACA GATGGTATAT TTAACCTGCC CTTTAAAGGT TTCACCGATG AATGGTGAAT	9000
TAGCTGCTTT GGAAGCAAAA TGGGAGTCCA CAAAGCGGTC AGCCTTGGCA TCAAAAATAG	9060
TGATATCTGC TGGACCATTC TCAGCCAAGT AACCTGCTTC AAAGTTGTAA AGCTTGGCTG	9120
GGTTGTATGT CATTTTTTCA AGTAATTCCA TCAAGCTCAA CTCACCAGCT TCTACTAAAT	9180
AGGTCAAGCT GAGAGACAGG GATGTTTCTA AGCCAGTCAT ACCAGATGGC GCTTTGGTAA	9240
TATCCTCAAC ATTTTTTTCA TCTACATGAT GAGGCGCGTG GTCAGTCGCA ATAAGTGA	9300
TGACACCTGA TTTGAGACCT TCGATAACGG CACGACGGTC TGATTCCAAA CGAAGCGGTG	9360
GATTCATCTT AGCATTGCTA CCTTGTGTTA AAAGAAGTGC TTCTGTCTTA GAGAAATGCT	9420
GTGGCGCTAC TTCTGCTGTG ACTTCTGCAC CTAACCCCTG AGCAAACTCC ACTACTTTAA	9480
CACCTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGTTGCA TAGGCAATCA	9540
TGACATCACG CGCCATCATA GCGTACTCAG CCACCCAGT AGCACCGCAG ATATGGAAAT	9600
GTTCCTTAGC AATATTTTCA TTAAAGCCAA GAACACCGTT CAAACCTGGA TCTTCCTCAT	9660
GAAGGCTGAT AAAGGTATTG AGTTTTTTGG CTTCTCCAT GGCTTCCTTG ACAATCTTAC	9720
TGCTCTCAAG CGGAATACCG TCATCAGAGA AACCAACCGC ACCAGCTTCT AAGAGTGCCT	9780
TAAAGTCAGT CAAGTTTTTA CCATTAAAGT TTTTAGTAAT GGTGCAACT GTCTTGACAT	9840
TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCAG TCTGAAATGG	9900
TTGGACTGGT ATTAGCCATC ATGACGACAG TAGTAAAACC ACCTGCAGCG GCTGCTAGGG	9960
CACCAAGTAT AATGTCTTCT TTATGTGTTT GACCAGGTT CCGGAAATGA ACATGAATAT	10020
CGACCAAGCC AGGAGCAACC ACAAGACCAG TAGCATCAAT CGTTTCTGCT CCTTCTCCG	10080
TGATCTCAGA CGCAATTTTG ATAATTTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT	10140
CCAAACCAGA CTTGGGATCC ATTACACGAC CATTTTTGAT TAGTAGCATC TGCTTTCTCC	10200

991

TTTATTCATA	GAAATCAACT	TGGGTATCCA	ACAATTTATC	CCCATCATAA	ACAAACTTGG	10260
CTGAAAAGAA	GGGTTTATCC	TCTAAAAGCC	ACTCAACAAA	GGTGTGGTCA	CCTTCCCAAG	10320
TCGGCTTGCT	CAAAACCTCA	TCATAGGGAA	CCCATTCTAG	CGTCCCCCTCA	TTGCAGTCAA	10380
TCAAGTCGCC	CTCAAACCTCC	GTCACCTTAA	AAACATAGGT	GTACCAGTCT	AAATCTGGTG	10440
TAAATTCAGG	AAAAGTGATG	ACACCTTTTA	GAAGTGGCTT	GGCTTTGAGC	CCTGTTTCTT	10500
CAAGGATTTC	ACGCGCCGCG	CATTCCTGGG	GCGTCTCTCC	TCTCTCTAGC	TTACCACCCA	10560
CACCAATCCA	TTTCCCTTCA	TGGACATCAT	TGGGTTTCTT	ATTACGATGG	AGCATGAGCA	10620
GTTCTTTCCC	ATTATCAATG	TAGCAAATCG	TCGCTAACTG	AGGCATATTT	TCTCCTTATC	10680
TAAGCCAATC	GATTGGCTCT	TGTCCTGTCT	CTTTTAAGAA	TGCATTGGCC	TTGGAAAAGG	10740
GCTTGGAACC	CCAAAATCCT	CTATAAACCG	ACAAAGGACT	TGGATGGGCT	GATTTCGATAA	10800
TCAAGTGATG	AGGATTGGTA	ACTAATGCCT	TCTTCTTACG	TGCATAAGCT	CCCCAGAGTA	10860
CAAAAACGAC	TGGTCTATCT	AGATGATTGA	CCACCTGAAT	CACAGCATCA	GTAAGGCT	10920
CCCAGATTG	ACCAGCATGA	CCATTGGCCT	GTCCAGCAGG	AACAGTCAAA	CAAGCATTA	10980
GAAGCAAGAC	TCCTTGCTCA	GCCCAAGCTG	TCAAATCATG	AGATTTCCTA	ACTCCGATAT	11040
CATCTGACAA	TTCTTTCAAG	ATATTTTGCA	AGGATGGTGG	AGCTGGGATA	GAGTCAGGTA	11100
CAGAAAACT	CAAGCCCTGC	GCTTGACCTG	GTCCGTGATA	GGGGTCTTGC	CCTAGAATTA	11160
CCACCTTAAC	TTCTTCAAGC	AGTGTGTGCA	AGAGAGCCTG	AAAAACCTTT	TCCTTGGGTG	11220
GATAAATAAT	CCCCTGAGAA	TAGACCTGCT	CCATAAACTG	ATTGATTTC	CCGAAATAAC	11280
CCTCAGGTAA	TTGCGCCTTA	ATCAAAGCAT	GCCAAGACGA	GTGTTCCATA	GCCGACTCGG	11340

(2) INFORMATION FOR SEQ ID NO: 148:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12127 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

AAAAAATAGA	CTTGTTAGAC	TATAAATGTA	GTAAGCCTAC	ACAAGAAAAA	TACATAGAGA	60
TAAAGGTGAT	TATTATGAAA	TTCAAAAAAA	TGCTTACTCT	TGCAGCCATT	GGCTTATCAG	120
GATTTGCGCT	TGTTGCCTGT	GGCAATCAGT	CAGCTGCTTC	CAAACAGTCA	GCTTCAGGAA	180
CGATTGAGGT	GATTTCACGA	GAAAATGGCT	CTGGCACACG	GGGTGCCTTC	ACAGAAATCA	240

992

CAGGGATTCT CAAAAAAGAC GGTGATAAAA AAATTGACAA CACTGCCAAA ACAGCTGTGA	300
TTCAAAATAG TACAGAAGGT GTTCTCTCAG CAGTTCAAGG GAATGCTAAT GCTATCGGCT	360
ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG	420
CTAGTCGAGA CACAGTTTTA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATTGTTT	480
GGTCTTCTAA TCTTTCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG	540
GTCAACAAGT GGTACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA	600
CAAGCCAACA CTTATCAGGC AAGTTGTCTG TTGTAGGTTT CACTTCAGTA TCTTCTTAA	660
TGGAATAATT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT	720
CTAATGGGTC TTCAGCAGGT ATTACCGCTG TTAAGGAGAA AACCGCTGAT ATTGGTATGG	780
TTTCTAGGGA ATTAACTCCT GAAGAAGGTA AGAGTCTCAC CCATGATGCT ATTGCTTTAG	840
ACGGTATTGC TGTGTGGTC AATAATGACA ATAAGGCAAG CCAAGTCAGT ATGGCTGAAC	900
TTGCAGACGT TTTTAGTGGC AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT	960
CCATAAATCT CTAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA	1020
GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAACAAG	1080
CCTTCAAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTCTGTAG	1140
CTATTTTGCT AATCTGTTTC TTTATTTTTA GTAATGGCTT ACCTTTCATA GCTAACTACG	1200
GCTTTGCCCC TTTTTTATTA GGCAGTGATT GGTGCGCAAC GAACATTCCT GCAAGCTATG	1260
GTATTTTACC AATGATCGTT GGTTCCTTAT TAATTACCTT AGGAGCGATT GTGATTGGGG	1320
TGCCAACAGG CATCTTGACA TCGGTGTTTA TGGTTTATTA TTGTCCAAAG CCCGTCTATG	1380
GCTTCTTAAA ATCAGCTATC AACTTGATGG CAGCCATTCC ATCTATTGTT TATGGTTTTT	1440
TCGGCCTACA ATTATTGGTG CCTTGGATTA GAAGCTTTTT AGGAAATGGC ATGAGTGTC	1500
TAACCGCTTC GTTACTATTA GGAATAATGA TTTTGCCAAC CATATCAGT TTGTCAGAAT	1560
CTGCTATCCG AACAGTCCC AAAACGTATT ATTCTGGTAG CTTGGCTCTA GGAGCTAGTC	1620
ATGAACGGAG TATTTTtagT GTCATCTTGC CAGCTGCGAG ATCTGGTATT TTATCAGCAG	1680
TTATTTTAGG AATCGGTCGC GCAGTAGGTG AAACCATGGC AGTTATTTTG GTGGCAGGCA	1740
ACCAGCCGAT TATTCCAAGT GGACTCTTTT CAGGAACCAG AACCTTAACA ACCAATATTG	1800
TTCTGGAAAT GGCTTACGCA TCAGGTCAGC ATAGGGAAGC CCTTATTGCA ACCTCAGCAG	1860
TTCTCTTTTT CCTTATCTC TTGATTAATG CCTACTTTGC CTACTTGAAA GGAAATCAT	1920
CTTATGAGTA AATACCTGCT AAAACTTCTC GTTTATTGTT TTTTCAGCTT AACCTTTGGC	1980
TCTCTCTTTT TAATCATTTG TTTTATCCTC ATCAAAGGCT TACCTCATCT AAGTCTATCC	2040

993

CTCTTTTCTT	GGACTTATAC	TTCTGAGAAC	ATTTCCCTTA	TGCCAGCGAT	TATTTCCACC	2100
GTTATTCTGG	TCTTTGGTGC	TCTTCTTTTA	GCCTTGCCCA	TAGGGATTTT	TGCTGGTTTT	2160
TATCTTGTGG	AATATACAAA	AAAAGATTCC	CTTTGTGTTA	AAATCATGCG	ATTGGCCTCA	2220
GATACCTTAT	CTGGGATTCC	TTCCATTGTT	TTTGGTCTGT	TTGGCATGCT	CTTCTTTGTA	2280
GTCTTCTTAG	GTTTTCAATA	CTCTCTGTTA	TCAGGAATCT	TAACCTCAGT	TATCATGGTG	2340
TTGCCAGTCA	TTATTGCTC	AACAGAAGAA	GCCCTTTTAT	CTGTTAGTGA	TAGCATGCGT	2400
CAAGCAAGTT	ATGGACTTGG	GGCAGGTAAG	TTACGGACTG	TTTTTAGAAT	TGTTCTACCA	2460
GTTGCCATGC	CAGGTATTTT	AGCTGGAGTG	ATACTAGCTA	TTGGCCGTAT	CGTTGGTGAA	2520
ACAGCTGCCC	TCATGTATAC	ATTAGGTACC	TCTACCAATA	CGCCAAGTAG	TCTCATGTCT	2580
TCAGGCCGTT	CTCTAGCCCT	ACATATGTAT	ATGCTGTCAA	GTGAGGGGCT	ACATGTCAAT	2640
GAAGCCTATG	CTACCGGCGT	GATTTTGATT	ATTACTGTTT	TAATGATAAA	TACTCTATCA	2700
AGCTTATPAT	CTCGAAAAC	TGTGAAAGGA	GCTTCCTAGT	ATGGGAACAT	TTTCAGTCAG	2760
ACACCTAGAC	TTATTTTACG	GGGATTTTCA	AGCCTTAAAA	AATATTTTCA	TTCAATTACC	2820
AGAAAGACAG	ATTACTGCCT	TGATAGGCCC	ATCTGGTTGT	GGCAAATCAA	CTTTTCTAAA	2880
AACCCCTAAC	CGGATGAACG	ATTTGGTTCC	TTCTTGCCAT	ATTGAAGGCC	AAGTCCTCTT	2940
AGATGAGCAA	GATATTTATA	GTAGCAAATT	CAACCTTAAT	CAGCTACGTA	AGCGGTAGG	3000
GATGGTTTTT	CAACAGCCTA	ATCCCTTTGC	CATGTCTATC	TATGATAACG	TGGCTTATGG	3060
CCCAAGGACA	CATGGTATTC	GAGACAAAAA	ACAATTAGAT	GCCTTAGTGG	AGAAATCTTT	3120
AAAAGGGGCA	GCCATTTGGG	AAGAAGTCAA	AGATGATCTT	AAAAAGAGTG	CCATGTCTTT	3180
ATCTGGCGGT	CAGCAGCAAC	GCCTTTGCAT	TGCGCGAGCT	TTAGCAGTAG	AACCTGATAT	3240
TCTGTTAATG	GATGAGCCGA	CTTCAGCCTT	AGACCCATC	TCCACTTTAA	AAATTGAAGA	3300
CCTCATTCAG	CAACTAAAAA	AGGATTATAC	GATTATCATT	GTTACCCATA	ACATGCAACA	3360
AGCTTCACGT	ATTTTACATA	AAACTGCTTT	TTTCTTAACA	GGAGAAATTT	GCGAATTTGG	3420
AGATACCGTT	GACGTGTTTA	CCAATCCAAA	AGATCAGCGC	ACAGAAGACT	ATATTTACAGG	3480
ACGGTTCGGA	TAAGGAAGGA	AAAACCTATG	AGAAATCAAT	TTGACTTAGA	ATTGCATGAA	3540
TTAGAACAAT	CCTTTTLAGG	ACTAGGGCAA	CTTGTCTTGG	AAACAGCTTC	AAAAGCCTTA	3600
CTGGCCTTAG	CCTCCAAAGA	CAAGGAGATG	GCAGAGCTAA	TTATCAATAA	GGATCATGCT	3660
ATCAACCAAG	GTCAAAGCGC	TATCGAATTG	ACCTGTGCCC	GTTTGTGGC	CTTGCAGCAG	3720
CCACAAGTGT	CTGACCTTCG	ATTTGTGATT	AGCATCATGT	CTTCTTGTTT	AGACCTTGAA	3780

994					
CGTATGGGAG	ACCATATGGC	AGGCATTGCC	AAAGCTGTTT	TGCAACTAAA	AGAAAATCAA
3840					
CTAGCCCCTG	ACGAAGAACA	GTTACACCAA	ATGGGTAAAT	TATCCCTCAG	CATGCTAGCC
3900					
GATTTATTGG	TTGCCTTTCC	TTTGCACCAA	GCCTCAAAAG	CTATTAGTAT	TGCTCAAAAA
3960					
GATGAACAGA	TTGACCAATA	TTATTATGCC	TTATCAAAGG	AAATCATTGG	ACTTATGAAA
4020					
GACCAAGAAA	CCTCAATTCC	CAATGGAACT	CAATACCTTT	ATATCATAGG	GCATCTGGAA
4080					
CGCTCGCTGA	TTACATTGCT	AACATTGTGT	AACGCCTAGT	CTACCTAGAA	ACAGGAGAAC
4140					
TAGTGGATTT	GAATTAATTC	AACTAATCCT	TAAAAGAGAA	GAGTACGATT	AAGTACTCTT
4200					
TTTTATGGTT	GTAaaaaaCT	TCATTTGACC	AATTTAAGCA	GTGTAGATAG	TGAGGAGTTG
4260					
TTTCAATTCT	ATCGTGAACG	AGGGAATGCT	GAAAACTTTA	TCAAAGAAAG	GAAAGCAGGA
4320					
TTCTTTGGGG	ATAAGACAGA	TAGTTCGACC	ATGATTAAGA	ATGAAGTACG	TATGATGATG
4380					
GGCTGTCTGG	CTTATAATCT	CTACCTCTTT	TTAAAGCAGC	TAGCTGGTGA	TGAAGTAAAG
4440					
TCCTTGACTA	TCAAGCGTTT	TCGACGTCTC	TTCCTTCATA	TTGCCGGAAA	ATATGTCTCT
4500					
ACTGCTAGAC	GACATATTCT	CAAATTCTCA	AGTCTATACG	CCTATTCAAA	ACAGTTTCAA
4560					
GCCTTATTTG	ATACAATCTG	CCAGATAAAT	CTGATACTCC	CTGTTCCTATA	TAGAGCTAGA
4620					
GGGCAGGGGA	AAACATGCCT	AACAGAATAA	GTCACCTTAT	TTTAAAAATC	GAGCATCAAA
4680					
CCAAGGGAGG	AGTCTGCCCT	TTTTTAGGAA	AAAATCAAGA	CAAATCTCCT	CAATTATGTC
4740					
TCGAACATCA	GAAATTAAGC	AAAATCACCA	GAAGGACAGT	ATTTCAACTA	GCTTTTCTGG
4800					
TAATTTTGA	ACTGTGTAGT	TCGTTAGTGC	CAGATATGAA	TAATTTGGGA	TGATAAATCT
4860					
TTCTTCCTCA	GGTAGCCTAT	CATAATACTC	TTCAAAAAATC	TTATCAAAAA	CACTCTCTTT
4920					
CTTTTGGGCG	ATAGTTTCAT	CTTCGTATGT	AGGAGTCCTC	ATCAAGAAAT	ACTTCAATTC
4980					
TAGGTATTCC	TTATCCAAC	CTATATAACT	TGGCATCAAC	TTGTAATCTT	CAACCCCAA
5040					
ACGTTACGCA	ATATATTTTA	ACTTTGTTAG	TATTGGTCTG	GATTCTCCAT	TTTCAATTCT
5100					
AATTAATTGA	CGGATACTTA	ATTCAGACTC	ATCACCACAA	AATTCTGAAC	GACTGATTTC
5160					
TTTAGCCAAA	CGTAATCTTT	TAATTTTTTC	GCCAAACTCT	CGCAACCTAC	AAGAACTTCC
5220					
TGAGTTGTTT	ACCTCTATTA	TAAGCATATA	CTGAATCAAA	CTATCTATCA	GATTCTTCTT
5280					
CACTTTAACT	AAAGACTAAG	AGTTTATCCC	TTCTGTCTCG	TTTTTGTTGA	TTTTTCCACC
5340					
ATACCCAGT	AATGCAAGTG	CAAAATCCCC	TAGAATATGA	TAGAATAAGA	GAAAGAACTC
5400					
TATCAAGGAG	GAAATCATGG	AAAAACAAAC	CGTCGCCGTC	TTGGGGCCTG	GTTCTTGGGG
5460					
AACCGCCCTT	TCACAAGTCT	TAAATGACAA	TGGACACGAG	GTACGTATTT	GGGGAAATCT
5520					
TCCCGAGCAA	ATCAATGAAA	TTAATACACA	CCATACTAAT	AAGCACTACT	TTAAAGATGT
5580					

995

CGTTCTAGAC GAAAATATCA TTGCCTACAC CGACTTAGCA GAAACATGA AAGATGTGGA	5640
TGCGATTTTG TTTGTTGTCC CAACAAAAGT GACACGACTT GTTGCCCAGC AAGTTGCACA	5700
AACCTTGGAC CATAAGGTTA TCATCATGCA CGCATCAAAG GGATTAGAAC CTGATAGCCA	5760
TAAACGATTA TCAACCATTC TTGAAGAAGA AATTCCTGAA CATCTCCGTA GTGATATCGT	5820
CGTGTGTTCA GGGCCTAGTC ATGCAGAAGA GACCATTGTG CGTGACCTAA CTTTAATAAC	5880
TGCTGCTTCT AAAGATTTAC AACAGCTCA ATACGTTTCA AAGCTATTTA GTAATCACTA	5940
CTTCCGACTT TATACCAATA CGGATGTTAT CGGGGTGAA ACTGCTGGTG CTCTTAAAA	6000
TATTATTGCT GTCGGTGCTG GAGCTTTACA TGGTCTTGGA TTTGGTGATA ATGCTAAGGC	6060
AGCCATCATC GCTCGAGGTT TAGCAGAAAT CACCCGCTA GGGGTAGCAC TCGGGGCCAG	6120
TCCATTGACC TATAGCGGCT TATCTGGTGT GGGAGATTG ATCGTAACGG GAACTTCCAT	6180
CCACTCTCGT AACTGGAGAG CTGGAGATGC TCTCGGACGA GGAGAATCCC TAGCTGATAT	6240
AGAAGCTAAT ATGGGCATGG TAATCGAAGG AATTCAACG ACTCGAGCAG CCTATGAACT	6300
AGCCCAAGAA CTGGAGTCT ATATGCCAT TACACAGGCT ATTTACCAAG TTATTTATCA	6360
CGGAACCAAT ATCAAAGATG CCATTTATGA CATCATGAAC AATGAATTTA AAGCAGAAAA	6420
TGAGTGGTCT TAACCTCTA TAGAAAGGAT TTTTATGACA TCAAAAGTTA GAAAGGCAGT	6480
CATCCCTGCT GCTGGACTAG GAACTCGATT TTTACCAGCA ACCAAGGCC TTTCCAAAGA	6540
AATGTTGCCA ATCGTAGACA AACCAACTAT CCAGTTTATC GTGGAAGAAG CTCTCAAATC	6600
AGGTATTGAA GATATTCTAG TTGTCCTG TAAATCAAAA CGTTCTATTG AGGACCACTT	6660
TGATTCAAAC TTCGAATTGG AATATAACCT CAAAGAAAAA GGGAAAACAG ATCTTTTGAA	6720
GCTAGTTGAT AAAACAACG ACATGCCGCT GCATTTTATC CGCCAAACTC ATCCACGCGG	6780
TCTCGGAGAT GCTGTTTTGC AAGCCAAGGC TTTCGTCGGA AATGAACCTT TTGTCGTTAT	6840
GCTTGGTGAT GACTTGATGG ATATCACAGA CGAAAAGGCT GTTCCACTTA CCAAACAAC	6900
CATGGATGAC TACGAGCGTA CCCACGCGTC TACTATCGCT GTCATGCCAG TCCCTCATGA	6960
CGAAGTATCT GCTTACGGGG TTATTGCTCC GCAAGGCGAA GGAAAAGATG GTCTTTACAG	7020
TGTTGAAACC TTTGTTGAAA AACCAGCTCC AGAGGACGCT CCTAGCGACC TTGCTATTAT	7080
CGGACGCTAC CTCCTCACGC CTGAAATTTT TGAGATTCTC GAAAAGCAAG CTCCAGGTGC	7140
AGGAAATGAA ATTCAGCTGA CAGATGCAAT CGACACCCTC AATAAACAC AACGTGTATT	7200
TGCTCGTGAG TTCAAAGGGG CTCGTTACGA TGTCGGAGAC AAGTTTGGCT TCATGAAAC	7260
ATCCATCGAC TACGCCCTCA AACACCCACA AGTCAAAGAT GATTGAAGA ATTACCTCAT	7320

996

CCAACTTGGA AAAGAATTGA CTGAGAAGGA ATAACAAAAT CATTTATATA AAGATTAGCC	7380
ACACATAAAT TAAGTAAAT CTCTACTTGA ATCTACCTAT TTAATAAAAA CTAATGAAAA	7440
CGCTATACTT GTATTTGTTT TTTCATTAAA ATAAGAGTAG AATAAATTAG TATAGTAAAA	7500
CAAAAAAGCA CCGAATCGGT GCGCACTTTT TCAAGTTGTG TACGACAAAA GCCTTATTTT	7560
AACTTTGCTA TGTGTTTCT AATGGTTCCA AAATAATAAA TAATTTTAAA TTGACTTAA	7620
CTGTTGGAGT AGTCATGGT AAATTAAATC AACCGAGCCG AACATAAGTT GTTTAATTTT	7680
GTGGAAGCTA TTAATAAAAA TATAATAAGG GAGAAAGATA GGTGTAATTT TAATTTTAAA	7740
GTAATTGCGG ACACTATCAA AGAAAAAGAT TATGGAGAAC AAATTGTAG AATTTATCGA	7800
AAACAATAAA AAAGTAATCA TTTCATCAGT TGCAGTTGGT GTTGTATTGG TATTAGGGTT	7860
TGGATGGTAT TCATATAACC AACACAAGC AGAACAACAA GCAAAAATTG TACAATTAGA	7920
AAAAGATAGC AAATCAGACA AAGAACAAGT TGATAAATA TTTGAATCAT TTGATGCATC	7980
TTTCAGATGAA TCTATTCTA AATTAAGA ACTATCTGAA ACTTCACTTA AAACCGATGC	8040
AGGTAAAGAC TATCTTAATA ACAAAGTCAA AGAATCATCT AAAGCAATTG TAGATTTTCA	8100
TTTGCAAAA GGTTCGGCTT ATGATGTTAA AGATTCAGAT GACAAATTTA AAGATAAAGC	8160
AACTCTTGAA ACAAATGTAA AAGAAATTAC AAAACAAAT GATTTTATCA AAAAAGTTGA	8220
TGAAACTTTT AAACAAGAGA ATTTGGAAGA AACTCTTAAA TCTCTAAATG ATCTTGTTGA	8280
TAAATATCAA AAACAAATCG AACTTTTGAA GAAAGAAGAA GAAAAGCTG CTGAAAAGC	8340
TGCTCAAAA GCAAAGGAAT CTCTAGTCA AAGTAATTCT TCTGGTAGTG CTTCTAATGA	8400
GTCTTATAAT GGATCTTCCA ATTCAAATGT AGATTATAGT TCATCTGAAC AAACCTAATGG	8460
ATATTCAAAT AATTATGGCG GTCAAGATTA TTCTGGTTCA GGAGATAGTT CAACAAATGG	8520
TGGATCATCA GAACAATATT CATCTAGCAA TTCAAACAGC GGAGCAAATA ATGTCTACAG	8580
ATATAAAGC ACTGGTGCTG ACGGCTATCA AAGATACTAC TACAAAGATC ATAATAATGG	8640
AGATGTGTAT GATGACGATG GAAATTACCT TGGGAACCTT GGTGGCGGCA TTGCAGAACC	8700
TAGTCAACGC TAATAACTAT TTTAGAGCTG TGTGTTTCG AATGGTTCCA AAACACATTA	8760
AAAGCTACTC ATTTTAAAG TAGCTTTTTT CTTATTCAAG TTTACATATT AACTCAATG	8820
AAAATCAAAT TCAAACCACG TCAGCATCGC CTTACCGTAG GTATGGTTAC TGACTTCGTC	8880
AGTTTCATCT ACAACCTCAA AACCATGTTT TGAGCTGACT TCGTCAGTTC TATCTACAAC	8940
CTCAAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCCTA GTTTGCTCTT TGATTTTCAT	9000
TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCCTACGA	9060
ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTATACAT CCGTTTTTCT CCTCTAACTG	9120

997

GAAAGATAAC TGCTAGAAAT GCGCCACCAA CTGCACCACC GATATGGCCT GCTAGGCTGA	9180
TTCTTGGAAT CAGAACACTT CCAATAATGT TAACCACAAA AAGTGTGAGA TAGGATTGCC	9240
CTAGCTGTTG GATATAAGGA TTGCGAGTTG CATAGCGAAG AACAAATAATC GCGGCAAATA	9300
GCCCATAAAG AGAGGTAGAG GCGCCTGCTG CTAAGGATTT AGGACTAAAT AAAAAACAA	9360
AGAGATTGCC CATCATTCCT GATAAAAGAT AGAGAAAGAA AAAGTGTCTA GAACCGAAAA	9420
TCTCCTCTAC CTGCCCTCCA AGATAATAAA GTGAAAGCAT ATTAACAATG AAATGTTCCC	9480
ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAAC CTGCTCGGGA AAGAGGCGAA	9540
TAGCTGGCCC ATACATGGCT CCAAATCGAA ATAATGTATC TGCCCTGTCA AAGTTTCCGC	9600
CTGCAGTGAC CAACATTAGT AAAAATACCA AGGCCGTGAC TAAGAGGAAG AAAGTGTCTA	9660
CAGGTAACG TCTATCAAAG ATTTCTTCA TCAATTAATA CCTCTGAAC AGGAATATCA	9720
TGGTTTTCAG GTATAAAGTC CTGAATTGA CAAGGATATA TCGTACTCAA AGTACGACCA	9780
GAAAAATGTT CCAGATAGCG GTCATAATAG CCTCCACCGT ATCCTATCCG ATATCCTTTC	9840
GTCTGAAAAG CCAGACCAGG AACATGAATC AAATCAATCT GAGATGCATC CACCACTTCC	9900
AAATCTCCCT GTAGCTCCAG TAAGGCAAAG AAAGTTTGA CCAACTGTTG CGGATCATAG	9960
ACCACAAAGT CCATGCGCCC CTGGGATAA GTTTTGGGTA TTAACCTT CTGCGCTCC	10020
TTCAGCGCCT GCTCAATCAG TTCCTGCGTT TGAAACTCAT GAGAAAAAGA GAGGTAGGTT	10080
GCGATGACCT TGGCTTCTTG ATAAAAGGGG TGTGTGAAAA GCCGCTCGGT TAAAGCTTGG	10140
TCTATAGCCT GTTTTGTGTC TTGAGATATA GCCTTCATTT CATGCAAGAC TTGCTTGGCT	10200
AATTCGATT TCATAGACAA GCCCTCTATT CTGCTGCCCT CTTTTTCAGG AAAGTAGACA	10260
CCGAGCCAC CCAATAGCT AAGACTTCTT CCTTAGGACT CATTTGAGG TGATGAAGAG	10320
CGTAGGACT ATCGATACCT AGCCAAAACA TCACGCCATC AACCTTTGAA AGGAGATAAC	10380
CAAAGTCTC GCCTGTCATA GCAGGTTCGA TATCAATCAA CTCGATTCCG TCTTTTTCGT	10440
CAAAGAAGTC CATCAGTTCA CGCGCCAAG CTGGATTGTT CTCAACAGGT AGGTATCCAC	10500
CTTGTTGAG TTCCACTTCG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG	10560
TTTTTACCCT CTTTTCGACC AAGAGACTCA TGTCTGTGT CAAGGCACGA ATAGTTCCAT	10620
GTAAAAAGC TGTGTCTGTG ATGACATTGT TGGTGGTTCC AGCTTGAAAA ACGCCGAAGG	10680
TCACCACTGC TCCCTCGATT GGGTTGACAT TCGGCTAAC AACTGACTGC ACTTGGGTCA	10740
CAAAGTAAT AGCCGCCACC AAGGCGTCAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC	10800
CTTTCCTTT GAAACGGATC TTCACCTCGC AAGTTCCTGC AAAGAGTGTG TGAGTATTAG	10860

998

TCGCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA	10920
ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTTCTTCAG	10980
CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTGCTC CTCAAGGGCG CGCTCAAGAC	11040
AGCCTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTT	11100
GAGAAGCAAA AGGTAGACCT GTTTGTTTGA CGATAGGCAG GCCATCAATA TCTGTCCGCC	11160
AACCAATGGT TCGCTCCGGC TGACTTCCCT GCAGGTAGAC CAAAATCCCT GTCCGCCAAG	11220
TACGAATTTG AACAAAATCC TTGCCCGTAG TCAATTTCTC AATCACATCC AGCAAATAAG	11280
CCTGAGTCTT GAACTCCTCC AAGCCAATCT CTGGAATCTG GTGTAAATCT CGTCTAGTCT	11340
GAATCAAATC TAACATCTAT CTGTCTCCG ATATAGCAGA AAGAGGCTGG AAAAAGGTT	11400
CCGCCTCTTT TTTACTTTTA CAATTACAAG GTACGAAGCG CATCCTCTAG CGCTGTTTTT	11460
TGTTGAGTTT GGGCATCAAT TTCTTTGATA ATACGAGCTG GAACACCTGC TACTACCACG	11520
TTTTCTGGGA CATCTTGGGT AACAAATAGCT CTGTCTGCGA CAACTGAACC ACTACCGATT	11580
TGGACTCCTT CGATAACCAC TGCATTAGCA CCGATAAGAA CATGTCTCTC GACACGGACT	11640
GGTTCAGCAC TAGCTGGCTC AATCACACCT GCCAAACTG CACCTGCACC AACGTGGCTA	11700
TTTTTTCCAA CGATGGCAGC GCCACCAAGG ATGGCACCCA TGTCAATCAT GGTTCAGCA	11760
CCGATTTTCAG CACCGATATT GATAACAGAT CCCATCATGA TAACAGCATT GTCACCAATT	11820
TCCACCTGGT CACGATAAT CGCACCTGGC TCGATACGAG CGTTGATAGC ACGCTTATCT	11880
AGCAAAGGAA CTGCAGAATT ACGAGCATCT TGCTCGACAA CATAATCTTG ATTTTCTACC	11940
AAACCTTCAA GAAGCGGAGC CACATCCTTC CAGTCTCCGA ATAGGACATT TCCTAGTTTG	12000
ACAACAGAGC TAGGCACAGC AGTTGCGAGT TGCCCCTCAA AGGTTACTTT GAACTGGTT	12060
TTCTTTTCAG CATTGGCGAT AAATTGGATA ATTTCTTGAG CGTTCATTTT TGTAGCAGTC	12120
ATAGGTG	12127

(2) INFORMATION FOR SEQ ID NO: 149:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12566 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

CCATCCTTCT GTTGATGTGA CAGGAATGAT GATAAATCAA CCAGTAGCTA GTCGCGAAGA	60
GGTGACAGAG GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT	120

CGTTGAGCCA AATGAAGCTG GAGAAACACG CTTTACCTAT GCCACTTATG GTGAGGGAAA	180
GCTTCCAGAA GGTCTGACCA TTTCCTCCAA GGAGAGTGCA GAAACGAGTG ATTTATTAGG	240
GTCTTACTTG ATTGTATCAG GAAGTTTGGG TGGAGTGAGC TTACAGACCA CCTTGAAAGA	300
GCTTGGTTAT CAAGGCTTTG TTTCGAATGG AGAAGATCCA TTTTCGATAG TCTTACTATT	360
GACGGCCACC CCTATGGTGC TACTGAGTTT AGCTATTTTT CTGCTGACCT TTATGAGTCT	420
GACCCTGATT TATCGGATCA AATCCCTTCG TCAGGCAGGG ATTCGCTTAA TAGCTGGTGA	480
GAGCTTGT TT GGAGTTGCTC TCAGACCAGT GTTAGAAGAT GTGAGACAGC TTATCTGCTC	540
AGTGCTGGTA TCCAGTCTTT TGGGATTGGG GATTCTCTGG TATCAAGGTG CCTTGTATAT	600
GGCAACGGTG CAACTGGTCA TCATTGCTCT TCTACTTTAT GGATTGACCT TGGCAGGGAT	660
TTCTACCTTA CTAAGTGTCC TCTATCTACT TGCTTTACAG GAAAATAGTC TGGTGGATCT	720
ATTGAAAGGG AAACCTCCCTC TCAAACGTAT GATGACATTG ATGATGGTGG GGCAACTCTT	780
AGCTGTATGT GTGTCGGAT CGAGTGCGAC AGCTCTCCTA CCCCCTACC GTGAAATGCA	840
GGAAATGGAG AGAGCTAGCA ATAAATGGAG CCAGTCTCA GACCGTTACC GTCTATCCTT	900
TGGTTGGTCT AGTGCATTG CCGATGAAGA AGGAACGCGT AAGGATAATC GTGAGTGGCA	960
GACATTTACT GAAGAACGGT TAGCCAATAC AGACTCTTTT TATATTATGA GCAATGTTGA	1020
CAATTTCTCA GATGGAGCAG AAGTGGACCT AGATGGCAAT CGTCTCAGTG ACTACACACC	1080
GTCAGGGAAT GTTATCTATG TCTCACC GCG CTATCTGATA GAAGAAAAGA TTACCGTTTC	1140
TTCAGAGTTT ATGGACAAGA TGCAAACTT GTCTGAGGGA GAGTTTGGGC TGATCTTGCC	1200
TGAGAGCTTG CGAGAGCAGT CTGTCTACTA CCAAGGATTG TTACAGATT ACCTGCAAAA	1260
CTTTTCATCT GAAAGTGTAG AAGTGACGAG TCAGAAACAC TACCTCCCAC AGGTAAGGCT	1320
AGCTTTTACA GAAACAGGAC AGGAACGTTT CCTCTATAAT GATGGGTACA AGACAACACG	1380
CCAGTACCTA AAAGATCCGA TTATTTGTAGT TCTAACGCCG CAAGCGACTG GAACAAGACC	1440
TGTTGCAGGG ATGTTGTGGG GAACTACGGC TAATAGTGCC TTGAAACTAG ATCGATATGG	1500
AGACAGCATC ACAGCTCTAA AAGAGAAAGG TCTGTATCAC AAGGTTTCTT ACTTGGTAAA	1560
AAGCCAGCTA TTTTGTGCA AGGTACTAAA TGACAAACGG CTGGAGTTT ACTCTCTCCT	1620
TATTTGGACG ATTTTGACCC TGTCTACGGC TATCTTGTTA TTTGATTCCA TGAATCTTCT	1680
CTATTTTGAG CAGTTTACAG GGAACCTTAT GATTAAACGT CTTGCTGGTA TGACAATCTA	1740
TGAGCTTCAT GGCAAGTATT TACTGGCGCA AGGAGGAGTT CTCTTGCTTG GCCTAGTCCT	1800
ATCTAGTATT TTGACAAGAG ATGGTTTGAT TAGCGCTCTA GTTGTAGCTT TGTTTACGCT	1860

1000

TAACGCCCTC TTGATTTTAG TAAGGCAGGA CAAAAAGAA GAAGCTGGTA GCATGGCAGT	1920
ATTGAAAGGA AAATAAGATG ATTGATATTC AAGGATTGGA AAAGAAATTT AATGACCGCG	1980
CGATTTTCTC TGGTTTGAAT CTCAAGCTGG AGAAGGGCAA GGTTTATGCC TTAATCGGAA	2040
AGAGTGGAAG CGGAAAGACG ACGCTGCTGA ATATCTTGGG AAAGCTAGAA AAGATAGATG	2100
GTGGAAGGGT TCTCTATCAG GGGAAAGATT TAAAAACCAT TCCCCTCGT GAGTATTTTC	2160
GAGACCAGAT GGGCTATCTC TTCAAAATTC TCGGCCTCTT AGAAAACCAA TCAATCAAAG	2220
AAAATTTGGA TTGGGTTTGT GTTGGTCAGA AAATCTCAA AGTAGAACGT TTGGAAGGC	2280
AAGTGGGGGC TTAGAAAAA GTTAATCTAG GGTATTTGGA TTTAGAACA AAAATCTATA	2340
CTTTATCTGG GGGAGAGGCC CAACGAGTTG CCCTTGCTAA GACTATTTTG AAAATCCAC	2400
CCTTGATTTT GGCAGATGAA CCAACAGCAG CTCTTGATCC TGAATTTCA GAGGAGGTTA	2460
TGAATCTCTT GGTGGATTTG AAAGATGAAA ATCGAATTAT CATCATGCG ACCCATAATC	2520
CCCTAGTCTG GAATAAGGCT GATGAAATCA TTGATATGAG GAACTTGCT CATGTGTGAA	2580
AAAATCCGTA TTCGCAGGGT ATCTGATTAT CCTAGTGCCA GAGGTGGTTT AGAAGATATC	2640
CTCATCATGG AAAATATGAC CAATCATCTC CTTTGGTTTC AAATCCGAT GCATGGCTAT	2700
TTGCTTGATT TTGCTAGTAT TGAAGGGCAA AGGCAAAAGC ATTATCGTTT GAAAAATTTA	2760
CCTCAGACGG TTGAACTGAC AGTGGATGAT GTGGAGGAGG ATGTGGATTT GACCCACCT	2820
GAAATCGAA GTTATCAAGA AGCTGATTTT TTTGAACGCA TGTTCGAGA GAACTGCTAA	2880
GGCCACTTTT AAAGATTTCC AAGACTATCT TTCTTCATGA GGAAAGATAG TTTTTTGGTA	2940
TGATTTTCAT TCCCAAAATA CAAGGGGAAT GTGTTACAAT AGTAGTAACA GATAATAGAA	3000
AAGAGAATAG ATGAGAATTG CAGATTATAG CGTGACCAAG GCAGTGCTGG AGCGTCACCG	3060
TTTTACCTTT AAAAAGTCCT TTGGGCAAAA TTTTTTGACG GATACCAATA TCCTTCAAAA	3120
AATTGTGGAT ACGGCTGAAA TTGATGATCA GGTCAATGTC ATCGAAATCG GGCCAGGTAT	3180
TGGTGCCTTG ACAGAATTTT TGGCTGAGCG TGCAGCCCAA GTCATGGCTT TTGAGATTGA	3240
CCACCGTTTG GTGCCAATTT TGGCAGATAC CCTGCGTGAT TTTGATAATG TGACCGTAGT	3300
TAACGAAGAT ATTCTCAAGG TTGATTTGGC GCAACATATC CAGAATTTTA AAAATCCTGA	3360
CCTGCCAATC AAGGTAGTGG CTAATTTGCC TTACTACATC ACGACGCCTA TTCTCATGCA	3420
CTTGATTGAG AGTGGCATTG CTTTTGTGA GTTTGTGGTC ATGATGCAGA AAGAAGTAGC	3480
GGACCGCATT TCAGCCAGC CTAACACCAA GGCTTACGGT AGCTTGTCTA TCGCCGTGCA	3540
GTATTACATG ACAGCCAAGG TTGCCTTTAT CGTGCCTCGT ACGGTCTTTG TGCCAGCGCC	3600
AAATGTGGAT TCAGCCATCT TGAATATGGT GCGTCGTCCA GAGCCAGCCG TAGCAGTAGA	3660

1001

AGATGAGAAC TTTTCTTTA AGGTTTCCAA GGCTAGTTTT ACCCATCGCC GCAAGACCTT	3720
GTGGAATAAC TTGACAGGTT ACTTTGGTAA GACTGAAGAG GTCAAGGACA AGCTGACCAA	3780
GGCTTTGGAC CAGGCAGGCT TGTACCAAG TGTGCGTGGG GAAGCTCTCA GCTTGGCAGA	3840
ATTTGCCGGT CTAGCAGACG CACTTAAAGG GCAAGGACTC TAAGATGCAG GGACAAATCA	3900
TTAAAGCCTT GGCAGGTTTC TACTATGTGG AGAGTGATGG CCAGGTTTAT CAAACACGCG	3960
CGCGTGGGAA TTTCCGTAAA AAAGGCCATA CCCCTTATGT TGGGGACTGG GTAGATTTCT	4020
CTGCCGAGGA AAATTCAGAA GGCTATATCC TCAAAATTCA CGAACGGAAA AACAGTCTGG	4080
TCGTCCGCC TATTGTCAAT ATCGATCAAG CTGTAGTAAT CATGTCCGTC AAGGAACCTG	4140
ATTTTAACAG CAATTTGCTG GATCGTTTCT TGGTTCTTTT GGAGCACAAG GGCATCCATC	4200
CCATTGTCTA TATTTCCAAA ATGGATTTGT TGGAAGATAG GGGAGAACTG GATTTTACC	4260
AGCAGACCTA TGTGACATC GGCTATGACT TTGTGACCAG TAAAGAGGAA CTCCTGTCTT	4320
TGTTAACAGG CAAGGTTACG GTCTTTATGG GGCAGACAGG TGTGGGAAG TCAACTCTTC	4380
TCAATAAAAT CGCACCAGAC CTCAATCTTG AAACGGGAGA AATTTCAGAC AGTCTAGGTC	4440
GCGGTCGCCA TACCACTCGA GCTGTTAGTT TTTACAATCT CAACGGGGGT AAAATCGCAG	4500
ATACACCAGG ATTTTCATCC TTGGACTATG AAGTATCAAG GGCTGAAGAC CTCAATCAGG	4560
CTTTCCAGA GATTGCTACT GTTAGCCGAG ATTGTAAGTT CCGTACTTGT ACCCATACCC	4620
ATGAGCCGTC TTGTGCCGTC AAACCAGCTG TTGAAGAGGG TGTATTGCA ACCTTCCGTT	4680
TTGACAATTA CCTGCAATTC CTTAGTGAAA TTGAAAATCG TAGAGAAACC TATAAAAAAG	4740
TCAGCAAAAA AATTCAAAA TAAGGAGAAA CCTATGTCTC AATACAAGAT TGCTCCGTCA	4800
ATTCTGGCAG CAGATTATGC CAACTTTGAA CGTGAAATCA AACGTCTAGA AGCAACTGGG	4860
GCAGAATATG CCCATATCGA TATCATGGAC AGTCATTTTG TACCGCAAAT CAGTTTGGT	4920
GCAGGTGTGG TCGAGAGCCT TCGTCCTCAT AGTAAGATGG TTTTCGATTG CCACTTGATG	4980
GTGTCAAACC CTGAGCATCA TCTGGAAGAT TTGCGCGTG CAGGTGCAGA CATCATCAGT	5040
ATCCATGTAG AAGCAACGCC TCATATTCAT GCGGCCCTCC AAAAAATTCTG TTCACTCGGA	5100
GTTAAGCCTT CAGTCGTTAT CAATCCTGGC ACATCAGTTG AAGCCATCAA GCACGTCCTT	5160
CATCTAGTTG ACCAAGTTT AGTCATGACG GTTAATCCAG GTTTTGGTGG GCAAGCCTTT	5220
CTGCCAGAAA CCATGGATAA GTCCCGTGAG TTGGTTGCTC TTCGTGAGGA AAAAGGTTTG	5280
AACTTTGAAA TCGAAGTGGA TGGTGGGATT GATGACCAA CTATTGCTCA AGCCAAAGAA	5340
GCCGTTGCCA CTGTTTTTGT AGCAGGTTCC TATGTCTTTA AGGGAGAAGT CAATGAGCGA	5400

1002

GTACAACTC TCAGAAAACA ACTGGACTAG GGTGTCAGTT TTTGCAGGCG GAAACCGCGG	5460
TCATTATCGG ACAGATTTTG ATGCTTTTGT TGGGGTGGAT CGAGGCTCGC TCTGGGTCTT	5520
GGAAGAAGAC TTACCTCTTG CTCTAGCAGT CGGAGATTTT GATTCTGTGA CGGAAGAAGA	5580
GCGACAGGTG ATTCAAAAAG GTGCCCAGTA TTTTGTCCAA GCACGACCAG AAAAGGATGA	5640
TACAGATCTG GAATTGGCTC TCTTAACCAT CTTTGAACAA AATCCTCAGG CTCAGGTCAC	5700
TATTTTCGGT GCCTTGGGTG GCCGTATTGA CCATATGTTG GCCAATGTCT TTCTGCCTAG	5760
CAATCCTAAG TTGGCACCCCT ATATGCATCA AATAGAAATT GAGGATGGGC AAAACTTGAT	5820
TACTTATTGT CCAGAAGGAA TCAGTCAGCT AGAACCTCGT TCAGACTACG ACTATCTAGC	5880
CTTTATGCCA GTTCGGGATA GCCAGCTGAC TATTCTTGGG GCCAAGTATG AGTTGACAGA	5940
GGAAATTTT TTCTTTAAAA AAGGTACGC TTCTAACGAA TATATAGATA GGGAAGTGTC	6000
GGTAACTTGC CCAGATGGTT ATGTGGTCGT ACTGCATAGC AAGGACAGGA GGTAGGATGG	6060
AAAGTTTACT TATTCTATTA TTAATGCCA ATCTAGCTGG TCTCTTCTG ATTTGGCAAA	6120
GGCAGGATAG GCAGGAGAAA CACTTAAGTA AGAGCTTGGG GGATCAGGCA GATCATTTGT	6180
CAGACCAGTT GGATTACCGC TTTGACCAAG CCAGACAAGC CAGCCAGTTA GACCAAAAAG	6240
ATTTGGAAGT GGTGTGCAGC GACCGTTTGC AAGAAGTCCG GATTGAATTG CACCAAGGTC	6300
TGACCCAAGT CCGTCAAGAA ATGACAGATA ATCTCCTCCA AACTAGAGAC AAGACAGACC	6360
AACGTCCTCA AGCCTTGACG GAATCAAATG AGCAACGTTT GGAACAAATG CGCCAGACGG	6420
TCGAGGAAAA ACTAGAAAAG ACCTTGACAG CACGCTTACA GGCTTCCTTT GAGACAGTTT	6480
CTAAACAACCT GGAGTCTGTC AATCGTGGCC TTGGAGAAAT GCAGACAGTT GCCCGTGATG	6540
TCGGAGCTCT TAACAAGGTT CTCTCTGGAA CCAAGACGCG AGGGATTCTG GGAGAATTGC	6600
AACTGGGGCA AATTATTGAA GACATCATGA CACCTGCCCA GTACGAACGA GAATACGCAA	6660
CGGTTGAAAA CTCTAGTGAA CGAGTGGAGT ATGCCATCAA GTTACCCGGA CAAGGCGACC	6720
AAGAATACGT CTATCTGCCA ATTGACTCTA AGTTTCCACT GGCAGATTAT TACCGCTTGG	6780
AAGAAGCCTA TGAGACAGGT GACAAGGATG AGATTGAACG CTGTCGTAAG TCACTCCTAG	6840
CAAGCGTCAA GCGCTTTGCT AGGGATATTA GGAACAAGTA CATAGCACCA CCTCGGACGA	6900
CCAATTTTGG AGTTTGTGTT GTTCCGACAG AAGGTCTCTA CTCAGAAATC GTCCGCAATC	6960
CGGTCCTCTT TGATGATTTG AGACGGGAAG AACAGATTAT TGTGTCAGGA CCAAGTACCC	7020
TATCAGCCCT TCTTAACTCC CTATCAGTTG GTTCAAGAC CCTTAATATC CAAAAGAGTG	7080
CCGACCATAT CAGCAAGACT CTTGCCAGTG TCAAGACCGA GTTTGGCAAG TTTGGTGGTA	7140
TTCTGGTCAA GGCACAAAAA CATCTCCAAC ATGCCTCTGG CAATATTGAT GAATTATTAA	7200

1003

ACCGTCGTAC CATAGCTATC GAGCGGACGC TCCGTCACAT TGAGTTGTCA GAAGGTGAGC	7260
CTGCGCTTGA TCTACTCCAT TTTCAAGAAA ATGAGGAAGA ATATGAAGAT TAGTCACATG	7320
AAAAAAGATG AGTTATTTGA AGGCTTTTAC CTAATCAAAT CAGCTGACCT GAGGCAAACCT	7380
CGAGCTGGGA AAAACTACCT AGCCTTTACC TTCCAAGATG ATAGTGGCGA GATTGATGGG	7440
AAGCTCTGGG ATGCCCAACC TCATAACATT GAGGCCTTTA CCGCAGGTAA GGTGTGCCAC	7500
ATGAAAGGAC GCCGAGAAGT TTATAACAAT ACCCCTCAAG TCAATCAAAT TACTCTCCGC	7560
CTGCCTCAAG CTGGTGAACC CAATGACCCA GCTGATTTCA AGGTCAAGTC ACCAGTTGAT	7620
GTCAAGGAAA TTCGTGACTA CATGTCGCAA ATGATTTTCA AAATTGAAAA TCCTGTCTGG	7680
CAACGGATTG TCCGAAATCT CTACACCAAG TATGATAAGG AATTCTACTC CTATCCAGCT	7740
GCCAAGACCA ACCACCATGC CTTTGAAACG GGCTTGGCCT ATCATAACGC GACCATGGTG	7800
CGTTTGGCAG ACGCTATTAG CGAAGTTTAT CCTCAGCTCA ATAAGAGCCT GCTCTATGCG	7860
GGGATTATGT TGCATGACTT AGCTAAGGTC ATCGAGTTGA CGGGGCCAGA CCAGACAGAG	7920
TACACAGTGC GAGGTAATCT TCTTGACAT ATCGCTCTCA TTGATAGCGA AATTACCAAG	7980
ACAGTTATGG AACTCGGCAT CGATGATACC AAGGAAGAAG TCGTTTGTCT TCGTCATGTC	8040
ATCCTCAGTC ACCACGGCTT GCTTGAGTAT GGAAGCCCAG TCCGTCCACG CATTATGGAA	8100
GCAGAGATTA TCCATATGAT TGACAATCTG GATGCAAGCA TGATGATGAT GTCAACAGCT	8160
CTTGCTTTGG TGGATAAAGG AGACATGACC AATAAAATCT TCGCTATGGA TAATCGTTCC	8220
TTCTATAAAC CAGATTTAGA TTAATAATTT AAGAAAAATG AGCATT'TTTT AGGATAAGAA	8280
TGTTTCGTTTT TTTATGTGAA TATGGTATAA TAAGTAAAAG AAAAAATGA ATACTCTTCG	8340
AAAATCTCTT CAAACTAGGG TAGTATCGCC TTGTCGTATG TATATATGCA GGTATATTAC	8400
AGGGTTTGTC AGTTCTATTG ACAATCTCAA AACAGTGTTT TGAACCACCA GCGACCAGCT	8460
TTCTAGTTTG CTTTTTGATT TTTTGAATAA AAATGGAATA GGAAATAGAA ATGAAATTAA	8520
GAAGAAGTGA TCGGATGGTT GTCATTTCCT ACTATTGAT TAATAATCCT TATAAACTAA	8580
CTAGTCTCAA TACTTTTGCT GAAAAGTATG AGTCTGCTAA ATCATCCATC TCAGAAGATA	8640
TCGTCAATTAT CAAACGCGCC TTTGAGGAAA TTGAAATCGG TCATATCCAG ACAGTGACTG	8700
GGGCTGGCGG AGGTGTCATC TTCACACCGT CTATTTCGAG TCAGGATGCT AAGGAAATGG	8760
TTGAAGACTT CCGTACCAAG TTGTCAGAAA GTGACCGTAT CTTGCCAGGT GGTATATCT	8820
ATCTGTCTGA TTTGCTTAGC ACACCAGCCA TCTTGAAAAA TATTGGTCGT ATTATTGCCA	8880
AAAGCTTTAT GGACCAAAAA ATTGACGCGG TTATGACCGT AGCAACTAAG GGTGTGCCAC	8940

1004

TTGCAAAATGC AGTTGCCAAT GTCCTCAATG TCTCTTTTGT CATTTGTGCGC CGTGACCTGA	9000
AAATTACCGA AGGTTCAACT GTTAGCGTCA ACTATGTTTC AGGTTCAAGT GGTGACCGTA	9060
TCGAGAAAAT GTTCCTTTCA AAACGTAGTC TTAAGGCAGG CAGCCGTGTC TTGATTGTGG	9120
ATGACTTCTT GAAAGGTGGC GGAACGGTCA ATGGTATGAT TAGTCTCTTG CGCGAGTTGG	9180
ACTCAGAACT GGCAGGTGTA GCGGTCTTTG CGGACAATGC CCAAGAAGAA CGTGAAAAGC	9240
AGTTTGACTA CAAGTCACTC TTGAAGGTAA CCAATATTGA TGTCAAGAAC CAAGCCATCG	9300
ATGTTGAGGT TGGCAATATC TTTGACGAAG ATAAATAAGA GATAGAATAA AAGGTTGGAA	9360
CGATTGTCCC AGCCTTTCTT TGCAAACAGA ATAGAAGGAA GCTTATGAAA ACACCATTTA	9420
TCAATAGAGA AGAGTTAGAA GCGATTGTG CCGAGTTCCC GACTCCCTTT CACTTGATG	9480
ATGAGAAGGG GATTCGTGAG AAGCAAGAG CCGTCAACCA AGCTTTTTCG TGGAACAAGG	9540
GCTTTAAGGA ATATTTTGCA GTTAAGGCTA CTCCAACCTC AGCTATTTTG AAAATTCCTC	9600
AAGAAGAAGG TTGTGGTGTG GACTGCTCTA GTTATGTAGA GCTTTTGATG AGCCATAAAC	9660
TGGACTTTCT GGGTTCGTG AGTATGTCT CTTCCAACAA CACGCCAGAC AAGGAATACG	9720
CCTATGCACG TGAATTGGGT GCGACCATTA ACTTGGATGC CTTTGAAGAT ATTGAACATC	9780
TGGAGAGAGT AGCAGGCATT CCAGAAATCA TCTCTGTGCG TTATAATCCT GGAGGCGTTT	9840
TTGAACTGGG GACAGACATT ATGGACAATC CTGGGGAGGC TAAGTTTGGC ATGACCAAGG	9900
ACCAGCTCTT TGAAGCCTTT GCTATCTTGA AGGAAAAAGG AGCCAAGACT TTTGGGATTC	9960
ACTCCTTCCT AGCGTCCAAT ACCGTGACCC ATCTCTATTA TCCAGAGTTG GCTCGTCAGC	10020
TCTTTGAACT GGCTGTTGAA ATCAAGGAAA AGTTGGGCAT TTCGCTAGAC TTTATCAATC	10080
TTTCTGGCGG TATTGGTGTT AATTATCATC CAGACCAGGA GCCGAACCAT ATCGCCTTGA	10140
TTGGTGAGGG AGTTCGTAAG GTGTATGAAG AGGTTCTTAC GTCAGCAGGT CTTGGTCAGG	10200
TCAAGATTTT CACCGAATTG GGTGTTTTTA TGC'TGGCACC TCACGGTGCT CTAGTCACAA	10260
GAGTCACTCA TAAGAAGGAA ACCTACCGTA CCTATCTAGG TGTGGATGCC TCAGCAGTCA	10320
ACCTCATGCG TCCAGCTATG TACGGAGCTT ACCATCATAT TAGCAACGTG ACCCATCCAG	10380
ATGGACCAGC TGAAGTGGTA GATGTGGTCG GTTCACTCTG TGAACAACAT GATAAATTTG	10440
CAGTTAATCG CGAACTGCCT CATACAGAAA TCGGTGATTT GCTGGTCATT CATGATACAG	10500
GTGCCCACGG ATTTTCAATG GGCTACCACT ATAATGCCAA ATTACGTTCT GCGGAAATCC	10560
TCTATACCGA AGAAGGTAAG GCCCGTCAAA TCCGCCGTGC AGAGCGCCCT GAGGACTATT	10620
TTGCAACCTT ATATGGCTTC GATTTTGAAG AATAATCTGA TAATAGATTG AAAATGAAAT	10680
TGAAAAACAG ATTGCTTTCT AAAAAATAGG CAAAAATCTT GTTTTTCCTT CAAGTCGTGA	10740

1005

TATAATAAAA CTATAAAACG TTTTCAAGGA AGGTAACGAT ATGTCCTGAAG AAACAATTGA	10800
TTATGGACAA GTGACAGGAA TGGTGCAATC GACAGAAACC TTTGGGTCAG TAGATGGGCC	10860
TGGTATTGCG TTTATTGTCT TTTTGCAGGG CTGTCACATG CGTTGCCAGT ATTGCCACAA	10920
CCCAGACACT TGGGCTATGG AGTCCAATAA GTCACGTGAA CGGACGGTAG ATGATGTCTT	10980
GACAGAGGCC TTGCGCTACC GTGGTTTCTG GGGAAATAAG GGTGGGATTA CAGTCAGTGG	11040
AGGAGAAGCT CTCTTGCAGA TTGATTTCCT GATTGCTCTC TTCACCAAGG CTAAGGAACA	11100
AGGAATCCAC TGTACCTTGG ACACCTGTGC TCTTCCTTTC CGTAATAAAC CACGTTACCT	11160
TGAGAAGTTT GACAAACTCA TGGCTGTCAC TGACTTGGTT CTTTGGATA TCAAGGAAAT	11220
CAACGAAGAA CAGCACAAGA TTGTCACTAG CCAAACCAAT AAAAATATCT TGGCTTGTGC	11280
CCAGTATCTA TCAGATATTG GAAAACCTGT CTGGATTGCG CACGTGCTAG TTCCAGGATT	11340
GACAGACAGA GATGATGACT TGATTGAAC TGGTAAGTTC GTCAAGACCC TCAAAAATGT	11400
TGATAAGTTT GAAATCTAC CTTATCACAC CATGGGTGAG TTCAGTGGC GTGAACCTGG	11460
AATTCATAT TCCCTCGAAG GAGTCAAACC ACCAACAGCA GATCGCGTCA AGAACGCTAA	11520
ACAACTCATG GATACCGAAA GTTATCAAGA TTATATGAAA CGTGTACATG GATAGAAAAG	11580
AAGCCTGATG GAAACATCGG GCTTTTGACT TGCAAAAAGA CTTAGCAAAT CAGCTAAGCC	11640
TTTTTCTTCT TATCTCGAAC GTTGTTTTCC AGCGTTGCGA TTTTGTGTT TTTTCTTGCT	11700
TGTGATAGCA GTTGGTTGTT CAGGGGTAAC GTCTTTTCGT CCACTTGGTT TAGAGAAAGC	11760
ACTTGCTTTT GGTGGGTCT TGGCTAGTTC TTCACGGACT TTTTGGCGAA GTTTTGACG	11820
AACGATATAG TTGACGATAA ACTGTTGGAG AATCATCATG AAACCACCGA CAACCCAGTA	11880
AAGTGTGACA CTAGCTGCTG AGAAGAGGGA GAAGACGACG ATCATGAGTG GGCTCATGTA	11940
AATCATTTTC TTGATTGTT CTCTTTGCAT TTCATCTTCT ACTCCGTGAA GTGAAAGGAG	12000
CGATTGAAGA TAGTAAAGGA CACCAGCACA GGCAACCAAA ATCATACTTG GAGAACCTAG	12060
AGGAATGCCT AGGTAGCTTG CTTGAGCAAC CCCTTCAGTA TGTGGGCAG CAAAGTAGAT	12120
AGCAGAGAAG AAAGGCATTT GAAGGAGGAT AGGGAACAT CCTACACCGC CAAACATGCT	12180
GATACCGTGC TCTTTTGAG CAGCAAAGAC AGCTTGTGG GCTTCGAGTT TTTCTTCTTG	12240
AGTAGTCGCT TCTTTGAGAC GCGTTTGGTG TGGCTCAAGG ACGTGCTTGA GGGCGTTCAT	12300
CTTTTCAGAG TGAAGCGTTG CCTTCCATGA TTGGTAGATA CCAAGTGGA AGATAATCAA	12360
GCGTACGATA ATGATTACGA TAATGATAGC GACACCAAAG CCTAGACCTT TATCAGTAGC	12420
GAAGTACTTG ATGGCTTCAG CCAATAGGCGC TCCGATCGTA TTCCAAATAA ATCCTGTTGG	12480

1006

CTGACCTGTG GTTTTATCGA CATTGACACA GCCAGTCAAG ACAAGCAACA TAGCCACTCC	12540
CATAGCCGAG AGTGCAAAAT CGGGGT	12566

(2) INFORMATION FOR SEQ ID NO: 150:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 5238 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

TGACACTCTG TAGGATTGTC GTTAATTGAT TGCTCGTACT CTCTACAATA ACCACCAAAG	60
TAAAAACGAC ATAGAAAGAT AGCATCAGCT GTAGCCATAG CGCCTTTGAC ACCTTCTGGA	120
TGATTATGAG TTACCTCTGC AGAAAGACTC GTAAGTCCTC TAGATGATGG CCATATACCA	180
GTTTTCGCAT AAAAACCACA GTCCATGATC CAAGCACATG GAGAAATACC CATAGCTGAT	240
CCATTCCCAA AGCTATTATA AGGCTCACGG TTATCGCTGT TTAGCCATGC ATTAAACCGA	300
GCACCGTAAT CAGCATTCGG ATACATTCTG CCATATTCTT TCATCGCGTC AATGAAGTCA	360
TCTTTTGTG CACCATTTCAT AATTGCTTCT GCAACAGCAC AGGTCATAAC CGTGTCTCT	420
GTAAAAAGC AGTCCTTCCG AAATAAGGA AAGTCCTTG TTTTGATATT GTTCCATTCTG	480
TAAACAGAAC CGACAATAIC TCCAATAATT GTCCTAAGCA TCAGATTCTT CCTTGTTCTAT	540
TTTGATGCTT TTTATATTGG TTATCTACCA TATTTATTTT AGAAAATAAC ATCCTGTTGG	600
ATTTTAAAAA TTTTATTTT TTCAAATAG GGTTTTACCA TTTCTTTCCA CCTAGCTCTA	660
TGAAAATTGA TTGATTTTAA AGGAGATAGG CCATAATTTC CCAATGCATA ACCATCATTT	720
ACTTCAACAA CAAGTGTCTT GCCATCGCGA GTAACACCGA TATCTAGTCC ATAAGCTATT	780
GGCGCATCTT TCCAACATGA TATCGCTTCA TCAATTACAC TTGCATCAA TTGTGCATGA	840
TAATCACCTG TATAGGGTCG AACATCTAAT ACGCGACCAT CTAACACAAA ACAACGCCCT	900
TCAGCTATGA ATTCTACAAC CTCCTAATC CATATAGGAT AGTCGAAAGG TAGACCAATA	960
CCTATTAAAT CATGGGTCC ATTAACAAC CTTCAGTAA AGACTTTTGA ACCAGCTTTA	1020
GGCTTAATAA ATTTTCCCA ATTATCAGGT ATATTCACAA TCTCTCTAA AATACCAGCA	1080
TAAATCTTTC GACCATAAAA CTCTTTAAGC TCAATAGGAT AGTCATGAAC CGGAACGTTT	1140
AAGCCCATCA TTTTGTAGTA TGCTCTAGTC TCCATTATAT AATCTACAAC TATATCTTCA	1200
CTTGTTAACT CTTTATTTT AGAAAAAGAT TGATATAAAA TAACTTCTTC TCCTTGTAAG	1260
TAGGCACCTA CTTGAGCATT GTATTATTA ATTGAAACCT CACTTGGTAA TTTACTTTGT	1320

1007

CTAATATAAA CAACCATTTT ATCACTCCTA TATCACTAGT GTTACACCAA TTTGTAAAAA	1380
ATAATAGCAA TTTTGCTCTT ATTTTGTGA GTAAATAGCC CCCATAATAT CATCGAAATA	1440
ATCAACGGTA TTTAGGAGTA ATTCAATAAC CTGGGACTTT GTTAGTCGCA TTCCTTCT	1500
ATCTCTAGCA TCTTCTACTA AATTTTCAAG TTTCTCTAGA TTTTATCAT CCAAGCTAAT	1560
CATTATTCTA TTTTATCGG TTGCCATTTT CATCACCTCA AGTTAATCT ATCACAGGTG	1620
TAACACTAGT GTCAACTGGC TTTTATAATA CATTAGTTTA AAAGTGGAGA GGATTTTAA	1680
CACAGTAACT TTAAATCTTT GGTATTAAAA AATTTTCACA ATATTTATAG AAATAAATC	1740
TGTCTCAAA CAGTTATCAA ATCTAGTATA AATTATGAGC GGCTACTCTA ATACTTTCCC	1800
TCTAAACAAG AAAAAGACTT ACACTCAAGG GTTTTCTTCC CCCCCTTCGT TATAACGTTT	1860
TGACTCTTTT ACTAGCAAAG GTATATACTC ACAAGGAAGT TTGGTTGACT ATTGAATCTC	1920
TCCAACCTCT TCTTTAATAT ATCCTTCTAC ATCTTCAATC TCTACAAACA TTGGGTCTAA	1980
GTGACACAAG AAATGCCAAA CTTGATCCC TTTTCTCTG TAAAGAATCG CTTCAACGTC	2040
TTCACTTCCG AAAAAGCTTC TGTCGATTTC ATATCCGCGG CTTTCTAAGA AGTCTTTTGC	2100
TTTACGATAG TTCGTTCTC TTGTTTCGAC ATAGGCTTTA ACTTCATGGT TGTAAACGAC	2160
ATATGCATCA ATTTTGAAT ATCCTTCGAT CACTCTATCA TTTTGTAGGG ATAAATTTGA	2220
AATCTCTTC CAAATAATGT TTACATTTTC CTCAGGATCG AACATAAAT TAGATAAAGG	2280
AACAATATTT CCGTTAAAA TAATTTCAT ATAATCCGGT ATGTTTTAG GATTAAAAATA	2340
CTCCACTTCA AAACCATCTT CTGTTTCCAG AGTGTATCCC GGGATTTGAG CTACAAAGGC	2400
TTTCCCCTCT TCTATGGAAT CAAATGCTAC TAAATCTTTA GAATAATCAT TTTGGTACAA	2460
TTCCAATATA ACCATCGATA ATCTCTCCAT TTTCATTATC AGGCTAATGT AAATAAGCAC	2520
GTCACTGAC CAATTCAGGC TCTCTGTATC ATCTCATCAT ATTTCTACT TACTTTACGA	2580
GTCTTATACC CAGAACACAC CTTATCGACC TTCGGTCTCA CCTCGTCGCA TTGGCTGAAC	2640
ATCTACTTTT ACTTTGCTGA TGCTCAACT CGTACAAGCA GTGATACCGC CTCAGCGTGA	2700
TGCGTCAGTG GGAATCAAAA GGTTCGGGGA ACCTTTTGAG GATTAACTAC GTTCTCTAA	2760
TAAACTTACA CATTCAACTT GTTCATCAT GTCCAAACCT ATGTTGAGAT TTTCTTCTAT	2820
AATTGGTAGC TTAAAGTAA TGGATTTTAG CCATTGTCCG TTAGATTGTT TTTCTTCATA	2880
AACCTGAATT TCAGAAATCA AAGCTGAAAT TAACTGCCTA CGCTCTACAT CATTATGAC	2940
TTTATAGAGC TTATCAAAAT AGATCAGAAC CTTATATATG TTATCTCTG TAAGCTTTTC	3000
AGCTTCAATA GTCTGTTTCT TTGCTTTTCG ATCAATTAGT GATGATTCTA ATTCATCTAG	3060

1008

TTTGTACATAC ATACGATATA GTCTATCATC TAAATCCTGT TTCCTTCTCT TATAATGCTT	3120
ATCTTCAACA TCTAAATTAT CTATTTCTCT AATTAGCTTA AACTTTGTAG AATGACTCTT	3180
TCTCAATTCC TTTTGGTAAT TATCTATTTT TTTTCTATT TCAGAGGTAT CCACCTTCAT	3240
GTGATTTT TCTTGCATCA TAGAAGCAAA TTTCGGATTA CTTACTATCT TGACAATCAC	3300
CTCTGCAACA GCATCATCTA ACAATTCTTC TCTAATTGCT TTAGTGAATG TACACTTATT	3360
ACCTCTTATC ATCTGCCTAT GGTTACAACC ATAGTAATAA AAATCTTTAT ACTTTGTGCC	3420
ATCTTTCTTT TCTTGTATAC ACTTGTTCCT AACATTCCC ACTCCACATA TCGGGCATTT	3480
TACAATTCCA GAAAGCAAGT GTGTGCGTGT ATCTTTTCCT TTATTCACAT GCTCATATTT	3540
CTTTGCTTGA GATTTTAGCT TAACCTGAGC AGCTTGCCAA ACTTCATCGG AAATATAGC	3600
TTTATCTATC CCTTCAGATA TTAGATATTC ATCTTGTCTA ACCTGCTTAT ATTCAATTCT	3660
TGTACCATGA ACTTTTCTA AAGTTCTTCT TCCAAATGCT ATTTTCCCAT TATAACAGG	3720
ATTCTTTAAT ATCTTTCTTA TAAGACCTGC ATCAAAACAA GGATTCCTAC CATTCTGTCT	3780
TGGGATTTTT CTAATTCCAT GATTCTCTAA GTATTAGAT ATCCCATTTG CTCCTATCGT	3840
AGTATTTACA TACTGGTCGA AAATCGTTCT TATTGCAACT GCCTCTTCCT CATTTATAAA	3900
CAGCTTGCCG TCTTCAAGTT TATATCCATA CGGAGCAAAG CCACCATTCC ATTTTCCTTC	3960
CCCTGCTTTT TGAATGCGAC CTTCATTGT TTGAATACTG ATGTTTCTC TTCTATTTT	4020
AGCCACAGCT GATAAAACAG AAATCATTAG TTCCAGCA TCTTTAGATG AATCAATGCC	4080
ATCTTCAACG CAGATAAGAT TAACTCCATA ATCCTGCATT ATATGAAGTG TAGAAAGAAC	4140
ATCAGCGGCA TTTCTTGCAA ATCTTGATAA CTAAACACA AGAACAAAAG ATACTCCATC	4200
TTTTCCAGAT TTTATATCTT CCATCATTCG ATTGAAGTGT ATTCTACCTT CAATAGACTT	4260
GTCAGACTTC CCGGCATCTT CATACTCTCC AACAAATTCA TAATCGTTGT AAATAGCAAA	4320
AGCTTTTATT CGTGATTTTT GTGCCCTCTA CGAATACCCC TCTATCTGTA TTGACGTAGA	4380
TACTCGTGTA TAGAGGTATA CTTTTATTTT TTCTTTTGAC ATAGTATTAA CCTCAATATA	4440
ATTTTCTAT ATCATATATA ATTTTMTTAA TTAAAGTTTG GACTATCATT TCAAGTATAT	4500
TATAACACTT TTATTAGTCC GTCTCAATTT GTGTTTTTGC CATGTCAAAA CTATTTTCA	4560
TCTCTTGATT TTTTGCTGGC GTTGATCGG GTAGATTATC TAAATCTAAA GCACCAGCAT	4620
ATTTTGCAAT CAGATTTGCT ATTAAATCAG CCAATCCATT CCAGTCATTG TCCAATATAT	4680
ACCTCTCTA AAGTTTTATA TCTAATAATT ATTTGTTTAA TTAAGTTTTT TGACATTGAC	4740
AAGTGCTTTG GATTAGCAAC ATAGGAATCT CACTTCCGCC TCTATTCGG ATGAGCCGGC	4800
TTCAACCTTA GAAGTATCAT TACCCTCAT TTCTTCATAG CGGATAGGGT ATCCCTCCCT	4860

1009

ATATTCAAAC TCTTACTTAT CGCTCACTTT CTTTTGCTT AGCAGAACTT TTTTGCCGA	4920
ATTATTCAGC CGAAAGATCT TGACGGATAG GTTATTACGC TCCAAAAATA ATTAACGTCT	4980
TGCTTTGGTC TATTCAATTG TTAAGGTTC AATTATTATCG AGAGTTATTA ATCTTTTAA	5040
AATTTGACCA TCAGAAAATA TTTATCTTGA TGTAACAAAA TTCTATAAAT TACCCTCTTA	5100
TACTTAACAG TGAAAAGAAG TCTTCTTGG TAACCAATTG TGAATAGAA TTTGCTTATA	5160
TAAAAAGGTC CAATTCCCAC TGCATAAATA GCAGTGAAAA TTAGACCCCTC TTGGTAACTG	5220
TCATCTAAAA GTCTTCTA	5238

(2) INFORMATION FOR SEQ ID NO: 151:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 13425 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

GACGATTTAC GAAGAATCGA ACAAGAACCT GCTCCTATCA ATTCCCAACC TCTATCTCTA	60
AAATCTTGCA GTTCATGCTT ATACTTTTTT AAGAAATCTA GAATCATAGA TACGGTAGAT	120
GACATCGTCT GGTGACATT GGTCAAATA GAACAAACCA AAACGACTCG TTCTATACCT	180
CCAACCTTTC AAATGCATCT CATGTAAATG TTCTTCTTCC TTGTCCAAAT CAACAATGGT	240
GAAAATCCGA AATTCTACTC TGCTATTTCAT TGTCTTACCC CAAAATPAGA AAACATGCCT	300
GGCGTTATTT ATTAGATAAT TCTTCCACT TTTGACTCAA TCTCCAAAAA ATATAAGAAA	360
TCTGAATCGC AAAAATATC AATAAAACCC AATCTATTAT GAAAATCAAA AACACTTTCC	420
AACTGAAAGA ACTACCTCCA GTGACAAACT TTGAGAAAAA CGGTAGTAGA GCTAAAAAGA	480
GAAATAAAAT AGGAAGCATC CGCATTTGTT AAATCCGTTT GGCATAAAAA AATCTTTATT	540
TAAACGAAAA TATTATGGCA AAATTTACGC CAGTTTTTGA ACGGCTGATG TAGATATTTT	600
ATACTTTCAA AATGTTTAAA TGTGATTATT TATTTTGTAA AAATAGATCA CCAGCCCGAC	660
TGAAAGTGCT TATAGAATGA TAATAAGTCG CCTGCCGAAA ACAGCGAAAA ATAGCGGTGT	720
TATGCCGAGA TAATCTGACG CGATGCGAAA GTATATTGCA TACTTATTTT CAACAATTTA	780
GCAGAGTATT TTTATAAGTG TGATATAATA GAAGTATAAT TTGTTCTGAT AGTTTATTTT	840
ATGGAGAAGT AGATTTTGTAG AATGCCGAGG GTTCAATATG GTTGAGTTTA TAAAGTCTAA	900
GAAAGAAATG AGTGAGGAGG ATATTAAAGC AAATTCATC ACTCCTGCTA TTGTATCCAA	960

1010

AGGATGGAAA AATGGTGAGC ATATCGCTTA CGAAGAATAC TTCACTGATG GTCGAATTGA	1020
AGTTAGAGGA GATAAGGCTC GTCGTAAAGA AGGAAAAAAA TCAGACTATT CACTGTATTA	1080
CCAATTTGGA ACTCGAATTG CAATTGTTGA GGCAAAGGAT AATAAACACA GCGTTCGAGC	1140
AGGATTACAA CAAGCTATTG AATATGGAGA GATTTTAGAT GTTCCATTG TTTATTCTTC	1200
GAATGGTGAT GGCTTTATTG AACACGACCG TATCACGAGA GAAGAACGTG AGCTGGAGTT	1260
AGACGAATTC CCTACTCGTG AAGAATTATT TTCTCGTATG ACGAAGGAAA AAGGATTGAC	1320
GTACGAAATT ACAGAAGCTA TCTCAACTCC ATACTATACA GACGCCTTCT CAATGAAAAC	1380
GCCACGCTAT TATCAGCAAA TAGCTATCAA CCGTACTATT GAAACAGTTG CCAGAGGACA	1440
AAAACGAGTA ATGTTTGTGA TGGCAACAGG AACGGGAAA ACGTTCATGG CTTTTCAAAT	1500
TATTCATCGC CTTCGAAAAG CTGGTTTGGC TAAACGAGTT TTATTCTTAG CAGATAGAAA	1560
CATCTTAGTA GACCAAACGA TGGCTGAAGA CTTTAGGCCA TTCGAAAAGG TAATGACGAA	1620
AATTACACCA AAACTTTTGA CTGCTCCTGA AAAATTAAAT TCTTTTGAAA TTTATCTAGG	1680
GCTTTATCAG CAACTAACTG GTGAAGATGG AACTGAAACA CATTATCAAA AATTTGACAA	1740
AGACTTCTTT GATTTAATCG TAATTGATGA AGCGCACCGT GGTTCAGCTA AGGAAAACAG	1800
TAAC TGCGT AAGGTAATTG ATTATTTCAG TTCTGCGACA CAGATTGGGA TGACCGCTAC	1860
TCTTAAAGAA ACCAAGAATG CTTCCAATAC GGAATACTTT GGTGAGCCAA TCTATACTTA	1920
TAGTTTAAAA CAGGGAATCG AGGATGGTTT TTTGGCTCCA TATCGTGTTA TGAGGGTTAA	1980
TTTAGATGTG GATGTGGATG GTTATCGTCC AGAAACTGGA AAAGTTGATG CTAACGGACA	2040
ATTAATAGAA GATAGGTACT ACGGCAGGAA AGATTTTGAT AAAACCATTG TCATTGATGA	2100
TAGAACGCAA AGAGTTGCCA AGTTTGTTTC TGATTATATG AAGCAAAACA ATGCACGATT	2160
TGATAAAACA ATTGTTTTTT GTGTTGATAT TGACCATGCC GAGCGAATGC GTGCTGCACT	2220
TGTAAAAGAG AATCTAGACT TAGTCCAAGA AGACTATCGT TATGTCATGC AAGTAACTGG	2280
TGACAACGCT GAAGGAAAAG CTCAACTGGA TAACTTTATG GATGTCAATT CTAATTTTCC	2340
CGCTATTGTA ACAACGTCTA AATTATTAAC GACAGGAGTT AATGCTAAAA CATGTCGTTT	2400
GATTGTTTTA GACTCTAATA TCCAATCCAT GACTGAATTT AAACAAATTA TTGGTCGTGG	2460
CACACGTCTT TATCCTCAAA AGGGGAAAGA ATTTTTTACG ATTATTGATT TTCGAAATGT	2520
TACCAATTTG TTTGCTGACC CTGATTTTGA TGGTGATCCA GTGAAGGTGC TAGAAACAGG	2580
TGCGAAAACA GTCAGTGGTT CTACGCCCGG TTTCTAGAT GAGGAAGGTG ACCCAGTAGA	2640
AAAATATATC GTTACAGACA AGCAGGTTAC CATTCTTAAT TCTACTGTTC AAGTATTGGA	2700
TGAAAACGGG AAAC TGATTA CCGAAAGCCT GACCGACTAC ACTCGAAAGA ATATCTTAGG	2760

1011

TAGCTACGCC ACTTTGAACG ATTTTATCAC AGTTTGGCAT ACGGCAGATA AGAAGAAGCT	2820
TATCTTAGAC GAACTTTATA AAAAAGGAGT TTATCTAGAT GCTATTCGAG ACTCGGAGGG	2880
AATATCAGAA CAAGAAATCG ATGATTTTGA TTTACTCCTA AAACCTGCCT ATGGTCAAAA	2940
AGAATTAACC AAAACGGAAC GTATCAATAA ACTCAAACAA AGCGGATATT TATATAAATA	3000
TAGTGAGGAA GCGCGTGCTG TTTTGGAAT TTTACTGAAC AAATACATGG ATAAAGGTAT	3060
TGGAGAACTC GAAAGCATTG AACATTAAA ACTTCCAGAA TTTCAGATAT ATGGTGGAAC	3120
CTTCAAAATC ATCAATACTT ATTTTGGA TAAAAACGA TATTTACAAG CAATTAAAGA	3180
ATTGGAGCAA GAGCTATTTA CAGTAGCTTA ATGAAAGGAA AGTATGTCAA TTACATCAT	3240
TGTAAAAAGA ATTCAAGATA TCACTCGAAA CGATGCTGGT GTTAATGGTG ATGCTCAACG	3300
TATTGAGCAA ATGCTCTGGT TATTATTCTT AAAAATTAT GATAGCCGTG AAATGGTTTG	3360
GGAATTAGAA GAAGACGAGT ATGAGTCAAT TATCCAGAG GAATTAAAA' GGCGAAATTG	3420
GGCTCATGCT CAAAATGGGG AACGGGTATT GACAGGCGAT GAATTACTTG ATTTTGTC	3480
TAACAAGTTA TTCAAAGAGT TGAAAGAGCT TGAAATAACT TCAAATATGC CTATTCGAAA	3540
AACGATTGTT AAATCAGCTT TTGAAGATGC GAACAACAT ATGAAAAATG GCGTCTTGTT	3600
ACGCCAAGTC ATCAATGTTA TTGATGAAGT TGATTTCAAT AGCCCTGAAG ATCGTCATTC	3660
GTTTAATGAT ATTTACGAAA AAATCTTAA AGATATTCAA AATGCTGGGA ACTCAGGAGA	3720
ATTTTATACG CCACGTGCAG CGACTGATTT TATTGCCGAA GTTCTTGACC CAAAACCTGG	3780
AGAATCAATG GCACACCTTG CTTGCGGAAC AGGAGGCTTC TTGACTTCGA CTCTGAACCG	3840
TTTAAGTAGT CAACGTAAAA CTAGTGAAGA TACCAAAAAA TATAATACAG CTGTTTGTGG	3900
TATTGAAAAG AAAGCATTTT CTCATCTTTT AGCAGTTACA AATCTGTTTC TTCACGAAAT	3960
TGATGACCTT AAAATTGTTT ATGGAATAC TTTGGAGAAA AATGTTCTGT AATATACGGA	4020
TGATGAAAAA TTTGACATTA TTATGATGAA TCCACCTTTT GGAGGGTCAG AATTAGAAAC	4080
AATAAAAAAT AACTTTCCAG CAGAATTACG GAGTCTGAA ACAGCTGATT TATTTATGGC	4140
TGTCATTATG TATCGTTTGA AAGAAAATGG TCGTGTGGA GTTATTTTAC CTGATGGTTT	4200
TCTATTGGT GAAGGTGTAA AAACCTCGCTT GAAACAAAA CTGGTAGATG AGTTCAACTT	4260
GCATACGATT ATTAGGTTGC CTCATAGTGT CTTGCACCG TATACAGGAA TCCATACGAA	4320
CATTCCTTTT TTTGATAAAA CAAAGAAAAC AGAAGAACT TGGTTTTATC GTTTAGATAT	4380
GCCAGATGGT TATAAAAATT TCTCGAAAAC TAAGCCGATG AAGTCAGAAC ACTTCAATCC	4440
TGTTCTGTAC TGGTGGGAAA ATCGTGAAGA GATTCTGGAA GGTAAGTTCT ACAAATCTAA	4500

1012

ATCATTTACA CCTAGTGAAT TGGCTGAGTT GAATTATAAT TTAGACCACT GTGACTTTCC	4560
AAAAGAGGAA GAGGAAATCT TAAATCCCTT TGAGTTGATT CAGAATTATC AAGCGGAAAG	4620
AGCAACTTTA AATCATAAGA TTGATAATGT ATTAGCTGAT ATTTTGCAGT TGTGAGGAA	4680
CAAATAATGA CACCAGAACA ACTTAAAGCA AGTATTCTCC AAAGAGCGAT GGAAGGGAAA	4740
TTAGTGCCGC AAAATCCCAA TGACGAACCT GCAAGTGAAT TATTAAAGAG AATTAAAGCT	4800
GAAAAAGAAA AACTTATCAG TGAAGGAAAA ATCAAACGAG ATAAAAAGGA AACTGAGATA	4860
TTTCGTGGTG ATGATGGGAA ACATTATGGG AAGTTTGTCTG ATGGAAGCAC TCAAGAAATT	4920
GATGTTCCCTT ATGATATTCC TGATACTTGG GAGTGGGTGA GGTTTCTAC ATTGGTTGAA	4980
ATTGTCAGAG GTGGCTCTCC ACGACCAATC AaGATTATC TTACTTCTGA AGTAGATGGA	5040
ATAAATTGGA TAAAAATAGG TGATACTGAA AAGGGTGAAA AGTATATAAA TAATGTTAAA	5100
GAAAAAATCA AAAAATCAGG GCTTAACAAA ACTAGATTG TAAAAAAGG TACATTTTGT	5160
TTAACTAATT CTATGAGTTT TGGTAGACCT TATATTTTGA ATGTTGATGG TGCAATACAC	5220
GATGGATGGT TGGCTATTTC GAACTATGAA AACTCATTA AATAAGATTA CCTATTCTAT	5280
ATTCTTTCAT CAAATGTAGT TTATTCTCAA TTCTATCTC TAATTAGTGG AGCTGTGTGT	5340
AAAACTTGA ATAGTGATAA AGTTGCTTCT ATTCTTATCC CTCTCCCCC ACTATCCGAA	5400
CAACAACGAA TAGTAGAAGC AATCGAATCA GCTTTAGAAA AAGTAGATGA ATATGCTGAA	5460
AGTTATAATA GACTAGAACA GCTAGATAAA GAATTTCAG ATAAACTAAA AAAATCTATT	5520
CTTCAATATG CTATGCAAGG AAAATTAGTT GAACAAGACC CAAATGATGA ATCAGTCGAA	5580
GTTTTACTTG AAAAAATACG AGCAGAAAAA CAAAACTCT TTGAAGAAGG CAAGATTAAA	5640
AAGAAAGATT TGGACATTTT TATTGTTTCC CAAGGAGATG ATAACTCTTA TTATGGGAAT	5700
ATACCTATGA ATTGGGTGT TATAAAAATA AAAGATATTT TTTCAATAAA TACAGGTCTT	5760
TCTTACAAGA AGGGCGATTT AAGCATTAA AATAAAGGTG TTAGAATTAT ACGTGGTGGT	5820
AATATTAAGC CTTTGAATT TTCTCTGTTG GATAATGATT ACTACATTGA TACACAATTC	5880
ATCTCCTCTG AGCAAGTTTA TTTAAACAT AATCAGCTAA TAACACCTGT ATCAACCTCT	5940
TTAGAACATA TTGGAAAGTT TGCAAGAATC GATAAAGACT ATGATGCTGT TGTGGCTGGT	6000
GGATTATTTT TCCAATTAAC ACCATTGAA AGTTCAGAGA TTATTTCAAA ATTTCTATTA	6060
TTAACTTGT CCTCTCCGTT ATTTTATAAA CAATTGAAAG CAATAACTAA ACTATCAGGT	6120
CAAGCTTTAT ATAATATTCC TAAACTACA CTGAGCGAGC TATTAATTCC GTTAGCTCCT	6180
TTTGAGGAAC AGGAATTAT TACTCAAAAA GTTGAGAAAC TTTTGGAAAA AGTAAATCAA	6240
CTTTGAAAAT GATTCCTTTC ATCTCTTCAT GATTAGAAAT AGGGATTAAT AATTCGAGAA	6300

1013

TACTGGTACT ATTTAATGTT TTCCCTTTGA TAGCATCTTT TGAAATCACCT AAAGTAGAGA	6360
TAAGTGGCAA AAATATCATT AAGTAATCTC TGATAATATT TTCTTTATTA GCATAGGGGA	6420
ATATCGATAT AATGGCTTCA TTATGAGTGG CAGGAATATC CAATATGGCA ACTTTTCCAA	6480
TAGATAATTT AAAACTCATT AATAAAGTTC CTTTAGGTGA AATGTCTATT TTCTTTGATT	6540
TTAATGCTAA TTTAGAAATA GATTCTCTCG CATTAGTTAC ATAACCAGAT ATAGGCATAT	6600
CTGATATAGA TACCCAAGGT ATTTCAGTTC CCCAAAAAGT AGCTTCACTG CGTGGAGGAG	6660
TTTTTCCTAT TCTGAAGTTA ACTAGGCTAG CAAATTTAAT ATATCTCCAT GCTTCTGGGA	6720
TTTCATATAT AGGATAAGAG GTTGTTCGT CTTGTTCCTC ATAATAAGAG CCATAATCAC	6780
AAAAATAGCA GGTAGTCAGT TTGACCACCT GTTATTTTTT ACCAATTAAC AATTTTATCT	6840
ACAATATTTT GTTGTTCAGT AGCTGTTTTT CTTAGATAAA TTCGAGTAGT TTCTATACTT	6900
TCGTGTCCTA TCAAATCTGC AAGCAAGGCA ATATCATTTAT ACTTCGCTAA AAAATTCTTA	6960
GCAAATAAAT GCCTAAAAGA ATGAGGGTAA ATTACGTTAG GATTCATTTT GTATTTATCA	7020
GCATAATTTT TTAAGTGTG AGCAACTCCT CTTGCTGTAA TTGGTTCGTT AAATTTATTC	7080
AAAAATAAAT AACCACCTCG GCGATTTTCT GATTCTAACC AACTAAGACA ACTATTTCTT	7140
AATTTTTTAG GAATGTACAG TCTACGAATT TTACCACCTT TTGAGTAAAT GTCAAAATAA	7200
CCGATTTCTA CATGCTCTAC TTTTAGTTTA ATAAGTTCAC TTACACGAGC CCCAGTTGCA	7260
CCTAAAAACC AAACGACAAA ATGCCATTTT AAAATACCAT CTTTTTTCAA ACTACGTTTA	7320
AGAAAAAGGT AATCAGCATG GCTAATGACA TCTTCTAAAA ACGGTTTTTG CTGTACTTTG	7380
ACAAATTTTA ATTTCAAATC ATCATGACCA ATAAAAGCCA GATATTTATT TACTCCTTGT	7440
AGTCGCAAAAT TGACAGTTTT AGCTTTAAAA TTGTCTAATA AATATCCTTT GTATTCAAAT	7500
AAATCTTCCA TTTTGAGTTC GTAATTCTCC AAGAAAAATC GAACACCATA AAGGTACGAA	7560
CGCACAGTAT TTTCAGCTAA ACCAGCTTTC TTCAAATGTA ATTCAAAATC TTTCAACGTA	7620
AAACTCCTAT CTTATGTTTG ATAGAAATTC CACCGCACGT AAAACTATTA TACTAAATTA	7680
GTGCGTCAAT ATGGGCGAAA AATTGTTTCGA TTTTATCAAC GATTCTGGAT TGTTACAGAA	7740
GGGTGGGAG GGGGATTAAA TATTCCTTTA TAGTTTTCGT TAATAATTCT TTTTGTTTG	7800
TACTACCCGA CGCTTTTCT TCAATAACTG ACTGAACAAT AGGAGAGGAA AGAAAATTAT	7860
AGATGAAATG GCAATTAATA ACCCCCGATA AGACTCTTAT AACTGTAACA TGGCTATCTG	7920
CAACAGCCCA GCCATAAGGA TTTTATTTT CATGGTAAAT AGCTAATCGT CCTAACGTAC	7980
CTAGACCTGT TGAATTCAC ATTAATCAC CATCTCTTAG TAATCTTCT TTCTGGTAAC	8040

1014

TATGAACTGT	TTCGGGATCA	ATAAATCTTG	CTAAGTCAAT	AGAAAAGCCA	GACCATTTGAT	8100
TACATTTCTG	AGCAATCACA	GGGTATATAG	GAATATTTGA	ATATTTTGGG	GACTTCCCTC	8160
TTTGAATGTA	GGAGGTTATA	TCGTTTAACC	TCACCCATTC	CCAACCTTCT	GGTATTTTCA	8220
AAGGTACTTC	CTCATAATAA	GAGTTATCAT	CTCCTTGGGA	AACAATAGAA	ATGTCCAAAT	8280
CTTTCTTTTT	AATCTTGCCT	TCTTCAAAGA	GTTTTTGT	TTCTGCTCGT	ATTTTTTCAA	8340
GTAAACTTTC	GACTGATTCA	TCATTTGGGT	CTTGTTCAAC	TAATTTTCCT	TGCATAGCAT	8400
ATTGAAGAAT	AGATTTTTTT	AGTTTATCTG	GAAATCTTTT	ATCTAGCTCT	TCTAGTCTAT	8460
TATAACTTTC	AGCATATTCA	TCTACTTTTT	CTAAAGCTGA	TTCGATTGCT	TCTACTATTC	8520
GTGTGTGTTC	GGATAGTGGG	GGGAGAGCAA	TTAATAATAG	ATTAAAATTA	TAATCATTTGA	8580
TTGCAGGATA	ACTTGTTCCT	GATAGTTTAT	TATTAACACG	ATTGATAAAA	TTATCTGATA	8640
ATAAATAATA	TTTCAAATAA	GTTCGTATA	GTAAAGTATC	CAAAACAATA	AATGCTGTAC	8700
TAGCTATCAA	ATACTCTTTA	AGTTCTCTAA	CTACAGCAAT	ATTTTTTAGA	TATGGTCTAA	8760
CTGTGAAAA	TAAGACACTA	TTCTGCGAAA	CTAATTTTCT	AGCACGGGAA	GGCGCTTGTT	8820
CAGGTGAAAG	ATATTGTAGA	TTTTTGTAGT	TGATTATGTT	CTTTTTTCTA	TCAATACTAG	8880
ACGTATCTAT	ATACCTAAAG	GATTTCTCTG	GCTTATTTTG	CCCAAATTC	CAATAAATTG	8940
ATTTTATCCT	CACCCACTCC	CAAGTATCAG	GAATATCATA	AGGAACATCA	ATTTCTTGAG	9000
TGCTTCCATC	AGCAAACCTC	CCATAATGTT	TCTTATGTGC	TTCAAGTATA	TAAAAAGGCG	9060
TAAAAATACG	CCTATAGATA	ATGGGGTTGA	AATAGGTTTA	TTGTTGATGA	GATTGTAGAT	9120
AATTCATTTT	TTTACTTTCA	ATCGAATATT	CAAACTCTCC	ACCTTTTCTG	CCTGTAATTG	9180
TTTCATCATA	AATTCAATAT	CTTCAGGATT	TTCCCTTGGG	CAACCTCGGC	AGAAATATTC	9240
TTCCGCTCGA	TCAGGATTCA	AAAATCGACA	AGCACAAACA	AAACAGTCGC	CATCATCAT	9300
TATTGAGATA	ATATAGTAGA	TTGAAATAAG	ATGTAAACAA	ATCGATTAGG	AAAGTTAAAT	9360
TAGTTTCTAG	AAATTTTLAG	CAGATGTAGT	GACTATTCTT	AGTCTCAATT	TACTATGGCT	9420
TCAAATATAT	CTTTCGAAAA	AATATTTACA	GATGTGTAAT	TTTGAAGCTT	GCAAAAGTTA	9480
GTAAACTTGT	AGATTTTCAT	TTGAAGTAAC	TTGTTTTCTT	GCCCAGATAT	GTTTTTGAAA	9540
TTGAATTTTT	CCATAGTGAC	TCCTTAATTT	TCTTCTACAC	GTCTGATGAT	AAATCTAATT	9600
CGCAAAAGAG	TCAAGAGGAT	TTTTCGAAAA	ATAAATAGCG	ACCGAAATCG	CTATTTTAAG	9660
GGTTATAGGT	ATTGATGGC	TTAGACTGCT	GTGTGACTGT	TTACCCACAG	GCAATCTTTC	9720
TTCTATATTA	GTATTAGTAA	AGGTCTAAAT	AATTATCAAT	TTCCCATTTG	GAAACGAAGG	9780
TTGCATAACT	TGCCCATTTC	ATTCGTTTGG	CTTCAAGGAA	GCTAGTATAG	ATGTGATCTC	9840

1015

CGAGAGCAGC	TTTAACCACT	TCATCTTCTG	TCAAAGCTTT	CAAAGCGTTG	TGAAGAGTTG	9900
ATGGAAGGTC	TGTAATACCA	GCTTCCTTGC	GCTCTTCTGC	TGTCATGATG	TAGATATTTT	9960
CTTCGATAGG	AGCTGGTGCT	TCGATTTTAT	TTTCAATACC	ATACAAACCA	ACTTCCAAAA	10020
GAACAGCCAT	AGCAACGTAA	GGGTTCGCCA	TTGGATCCAC	TGAACGCAAC	TCAAGACGAG	10080
TTCCCATACC	ACGTGAAGCA	GGTACGCGCA	CAAGTGGCGA	ACGGTTACGA	CCAGCCC AAG	10140
CAATGTAAAC	AGGCGCTTCA	TAACCTGGAA	CCAAACGTTT	GTATGACTTA	ACTGTTGGGT	10200
TCATGATGGC	AGTATAGTTG	TAAGCATGCT	TGATCAAACC	GCCTAGGAAA	TGGTAAGCTG	10260
TTTCTGACAA	CTGCATTCCCT	TTTGGATCAT	TTGGATCAAA	GAAGGCGTTA	TTTCCTTCTG	10320
CATCAAACAA	GGACATATTA	CAGTGCATAC	CTGATCCAGC	AATACCAAAT	TTTGGCTTCG	10380
CCATAAATGT	TGCGTAAAGT	CCGTGTTTGC	GAGCAATGGT	TTTAACAACA	AGCTTAAAGA	10440
TTTGAATCTT	ATCACAAGCA	CGGAGAACTT	CATCGTACTT	AAAGTCAATC	TCATGCTGTC	10500
CAACCGCAAC	CTCGTGGTGA	CTCGCTTCTA	CTTCAAATCC	CATTTTGGTC	AAGACATTCA	10560
CAATCTCAGC	ACGTGTGTTG	TCCGCAAGGT	CAGTAGGTGC	CAAGTCAAAG	TAGCCACCCT	10620
TGTCATTCAC	TTCAAGTGTT	GGGTCCCAT	TTTCATCCAA	CTTAAATAGG	AAGAATTCTG	10680
GCTCTGGACC	AAGGTGAAG	GATTTGAATC	CAACTTCTTC	CATGTGACGA	AGAGCTCGTT	10740
TCAAATTACC	ACGAGGGTCA	CCCGCAAATG	GTTCACCTTC	TGTTGTATAG	ACATCACAGA	10800
TCAGACCTGC	AACACTTCCA	TTTTCATCTC	CCCAAGGGAA	GACTGTCCAT	GTATCCAAGT	10860
CCGGGTACAA	GTACATATCC	GACTCATTTGA	TACGTACAAA	ACCTTCAATA	GAAGATCCAT	10920
CAAACATAAC	CTTGTTTCGAC	AAGACCTTAT	CTAACTGTTC	ATCTGTAGCA	GGAATTTTGA	10980
CGTTTTTCAT	GGTTCCCAAA	ATATCTGAGA	ACATAAGACG	AATAAAGGTA	ACATTTTTTT	11040
CCTTGACTTC	ACGACGAATA	TCTGCAGCTG	TGATTGGCAT	AAGTTTCTCT	CTTAATCTAT	11100
GACTACTTGC	GGTTGCCTAA	CCGCGACCAA	AAGGTGACTG	TACTGAAGCA	AAACGCCCCCT	11160
GTTGGAGGAG	TTCAATTGTGA	AGTGCACGAC	GTACTTCAGT	CTGACTAACC	GCTTTCCTTGG	11220
ATTCGCTTTC	ACGTTTCAGCA	TATTTTTTCT	TAATGGCAGC	GATATTATAA	CCTTCAGAGA	11280
TATAATCTTT	GATTTCAAGC	AGACGATCCA	TGTCATTCAA	GGAATACATG	CGACGATTTC	11340
CTTCGTTTCG	ATCGGGCTTG	ATCAACTCTT	GATCTTCATA	ATAACGAATC	TGACGCGCCG	11400
ATAGATCGGT	CAACTTCATA	ACACTGCCGA	TAGGAAAAAC	AGCCATATTT	CGGCGAAATT	11460
CTTTTTCTCT	CATTTACAAT	TTCCTTCTTT	CTGTCTATTA	TAGTCTAAAA	AAAGACAAAC	11520
GTCAATTGAT	AATGTTATAA	AATGTAACAT	TATTTTCTCT	TTTTCTCTAA	AAAGAGACGA	11580

1016

ATACGATCAA TATCGTAATT TACGATAATT GCGACAAAAA CTCCCATAAA CGTTTCTAAT	11640
ACACGCACAA ACACGTACAA AATTGTCTCA CCACTTGGAA TTGATAGGGT AATGATTAAC	11700
ATAGCTGCTA CACCACCAAT AACCCCTGCT TTGTTATTCA TGGCTACATT TGTCATAATG	11760
GTTAACATGG TGCAGATTGG AACAACTACC AAGGTCACCC AAAAGGCTTC GTGGAAAAAG	11820
GTATTTAATA AGAAGAAGAC CAAGGCATAG AGTCCACCGA TACTATTTCC TAGAATACGC	11880
GAAGTCCCAA AATGAACACT CTCATCAAAA CTCTCCCTCA GGCTAAAAAC GGCTGTCAAA	11940
GCACCAATTT GAAGACCTTT CCAGCCAAAA AAGCCAAAAA TCAAGAGAAC TAGAAAAACA	12000
GCAATACCTG TTTTAAAGGT TCGCATACCA AGTTTGAACT GGGATTTATC GAATTTATAT	12060
TTTTTAAAT AACTCATAAT CTCAACTTTC TATTTCCATT TTATCATAAA TCGGTGATTT	12120
TTATGAGTAA TAGTTGAGAG GAAGCGTTTT TATTTTAAAG AAAAGAAAAG AGGAACCTTC	12180
ATCCCTCTCT TCTTTGATTT ATTTATAAAA TCTTATTTTT CTGTCAAGGC TGCAAGTCCT	12240
GGAAGAACCT TACCTTCAAG AAGTTCCATT GATGCTCCAC CACCCGTACT AATCCATGAG	12300
AACTTGCTCG CACGGCCAAG GTTAATCGCT GCGGCAGCTG AGTCACCACC ACCGATGATT	12360
GATTTAACTC CTGGTTGTTT CACGATAGCG TCCATCACAC CGATTGTACC AGCTTGGAAA	12420
TCTGGGTTTT CAAATACACC CATAGGTCG TTCCATACGA CTGTTTTGGC ACCAGTCAAA	12480
GCTTCGTCAA ATTTGGCGAT AGATTTTGA CCGATGTCAA GACCAAGGAA GCCTTCAGAA	12540
ACTGCTTCAC CTTCAAGTGC ACGCACTTCA GTGTAACCAG CAAATGCGTT AGCTTCTTTT	12600
GAGTCAACTG GCAAGATCAA TTTACCATTT GCTTTTTCAA GAAGACCTTT CGCAACATCC	12660
AATTTGTCTT CTTCTACAAG TGAGTTACCG ATTTTCGATAC CTTGTGCTTT GTAGAATGTG	12720
TAAGTCATCC CACCACCGAT AAGGACGTTA TCAGCTTTTT CAAGCAAGTT TTCGATAACA	12780
CCGATCTTGT CTGAACTTT TGAACCACCA AGGATAGCCA CGAATGGACG TTCTGGAGTT	12840
TCAACTGCTT CTTGGATGTA GGCAATTTTCG TTTTCAAGAA GGAACCAGC AACTGCTTTT	12900
TCAACGTTTG CTGAGATACC AACGTTAGAT GCGTGTGCAC GGTGAGCTGT ACCGAATGCA	12960
TCGTTTACGA AGATACCATC TCCAAGTGAT GCCCAGTATT TACCAAGTTC AGGATCGTTT	13020
TTAGATTCTT TCTTGCCGTC AACATCTTCG TAACGAGTGT TTTCAACCAA GAGAACTTGT	13080
CCATCTTCAA GAGCGTTGAT TGCCGCTTCT AATTCAGCAC CACGAGTGAC ACCTGGGAAA	13140
ACAAATCTT GACCAAGTTT TGCTGCCAAG TCAGCTGCTA CAGGAGCAAG TGATTTACCA	13200
GCTTTATCAG CTTCTTCTTT CACACGTCCA AGGTGAGAGA AAAGAATTGC ACGTCCACCT	13260
TGTTCGATGA TGACTTAAT AGTTGGAAGA GCTGCTGTGA TACGGTTATC GTTAGTGATT	13320
ACGCCATCTT TCAATGGTAC GTTGAAGTCA ACACGAACGA GGACTTTTTT ACCTTTCAAG	13380

1017

TCAACGTCTT TAACAGTAAG TTTTGCCATG TTACAAAAAC TCCGG

13425

(2) INFORMATION FOR SEQ ID NO: 152:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 905 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

GATTATCCT ACCGnGAAT TTCCGGAGGG GTTCTAGCAG CAATCTAGG AATCTATGAA	60
CGAATGATTG GCTTTCTGGC CCATCCCTTT AAAGACTTTA AAGAAAATGT TTTGTACTTT	120
ATCCAGTTG CCATCGGTAT GCTTCTGGGA ATCGGCTTAT TTTCTACCC GATTGAATAC	180
CTGCTTGAAA ATTATCAGGT TTTGTATTA TGGAGCTTTG CGGGAGCTAT TATCGGTACA	240
GTTCCTAGCC TCCTCAAAGA ATCAACTCGA GAATCTGACC GAGACAAGAT TGATTTAGCT	300
TGGTTATGGA CAACCTTTAT CATTTCTGGA TTAGGACTCT ATGCCTTAAA TTTIGTCGTT	360
GGAACCTTAA GCGCCAGCTT TCTTAACTTC GTCCTAGCAG GCGCACTATT GGCCCTTGGC	420
GTCTTGGTTC CTGGCCTCAG CCCATCAAAT TACTTTTGA TTTTGGGACT CTATGCTCCT	480
ATGTTGACTG GTTTTAAAAC TTTTGATTTC TTGGGAACCT TCTTCCGAT TGGAAATGGT	540
GCAGGTGCAA CTCTCATCGT TTTTTCAAAA TTGATAGATT ATGCCTTAAA CAACTACCAC	600
TCACGCGTCT ATCATTTTAT CATCGGTATC GTCCTATCAA GTACCCTTTT GATCTTAATT	660
CCAAATGCAG GAAACGCTGA AAGTATCCAA TACACAGGAC TTTCACTTGT CGGTTATGTC	720
ATCATCGCCT TCTTCTTTC GCTGGGAATC TGGCTTGTA TTTGGATGAG TCAATTGGAG	780
GATAAATATA AATAATGGCA AAAAAAGTTA AAATCAAAAA AACATTGGTG GAACAAATCC	840
TATCTAAAGC AGCTATCCCT CATCAGGGGA TTCAAATCAA TGCCCTAGAA GGAGAGCTTC	900
CTCAA	905

(2) INFORMATION FOR SEQ ID NO: 153:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4278 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

1018

CTTGAATTAA ATAAAAAAG TCATGCGACT AAGCATTTTA CTGATAAGCT TGTTGATCCC	60
AAAGATGTGC GTACGGCTAT CGAAATTGCA ACCTTAGCGC CAAGCGCCCA CAACAGCCAG	120
CCTTGGAAT TTGTGGTGGT ACGTGAGAAA AATGCTGAAC TGGCAAAGTT AGCTTATGGT	180
TCCAATTTTG AACAGGTATC ATCAGCGCCT GTAACCATTG CCTTGTTTAC AGATACGGAC	240
TTAGCCAAAC GTGCTCGTAA GATTGCCCGT GTTGGTGGTG CTAATAACTT TTCTGAAGAG	300
CAACTTCAAT ATTTTATGAA AAATCTGCCA GCTGAGTTTG CCCGTTACAG TGAGCAACAA	360
GTCAGCGACT ACCTAGCTCT CAATGCAGGT TTGGTTGCCA TGAAC TTGGT TCTTGCAATG	420
ACAGACCAAG GAATTGGTTC TAACATTATT CTTGGTTTTC ACAAATCAAA AGTTAATGAA	480
GT TTTGGAAT TCGAAGACCG TTTCCGCCA GAACTCTTGA TCACAGTGGG TTATACAGAC	540
GAAAAATTGG AACCAAGCTA CCGCTTGCCA GTAGATGAAA TCATCGAGAA AAGATAGAAA	600
GAAGAAAAA TGACAGCAAT TGATTTTACA GCAGAAGTAG AAAACGCAA AGAAGACCTC	660
TTGGCTGACT TGTTTAGCCT TTTGGAATC AATTCAGAAC GTGATGACAG CAAGGCTGAT	720
GCCCAGCATC CATTTGGGCC TGGTCCAGTA AAAGCCTTGG AGAAATTCCT TGAATTCGCA	780
GACCGCGATG GCTACCCAAC TAAGAATGTT GATAACTATG CAGGACATTT TGAGTTTGGT	840
GATGGAGAAG AAGTTCTCGG AATCTTTGCC CATATGGATG TGGTGCCTGC TGGTAGCGGT	900
TGGGACACAG ACCCTTACAC ACCAACTATC AAAGATGGTC GCCTTTATGC GCGCGGGGCT	960
TCGGACGATA AGGGTCCTAC AACAGCTTGT TACTATGGTT TGAATCAT CAAAGAATTG	1020
GGTCTTCCAA CTTCTAAGAA AGTTCGCTTC ATCGTTGGAA CAGACGAAGA ATCAGGCTGG	1080
GCAGACATGG ACTACTACTT TGAGCACGTA GGACTTGCCA AACCAGATTT CGGTTTCTCA	1140
CCAGATGCTG AATTTCCAAT CATCAATGGT GAAAAAGGAA ATATCACGGA ATACCTCCAC	1200
TTTGCAGGAG AAAATACAGG TGTGCCCCGT CTTACAGCT TTACAGGTGG TTTACGTGAA	1260
AATATGGTAC CAGAATCAGC AACAGCAGTC GTTTCAGGTG ACTTGGCTGA CTGCAAGCT	1320
AAACTAGATG CCTTTGTTGC AGAACACAAA CTTAGAGGAG AACTCCAAGA AGAAGCTGGC	1380
AAATACAAGG TGACGATCAT TGGTAAATCA GCCCAGGTG CTATGCCTGC TTCAGGTGTC	1440
AATGGCGCAA CTTACCTTGC CCTCTTCCTC AGCCAGTTTG GCTTTGCTGG TCCAGCCAAA	1500
GACTACCTTG ACATCGCAGG TAAAAATCTC TTGAACGATC ATGAGGGTGA AAATCTTAAG	1560
ATTGCTCATG TGGATGAAAA GATGGGTGCT CTTCTATGA ATGCCGGCGT CTCCACTTC	1620
GATGAAACAA GTGCTGATAA TACCATTGCC CTCAACATCC GCTATCCAAA AGGAACAAGT	1680
CCAGAACAAA TCAAGTCAAT CCTTGAAAAC TTGCCAGTTG TTTCTGTTAG CCTGTCTGAA	1740
CACGGTCACA CGCCTCACTA TGTGCCAATG GAAGATCCAC TTGTGCAAAC CTTGTTGAAT	1800

1019

ATCTATGAAA AACAACTGG CTTTAAAGGT CATGAACAAG TCATCGGTGG TGGAACTTTT	1860
GGTCGCTTGC TAGAACGCGG AGTTGCCCTAC GGTGCTATGT TCCCAGACTC GATTGATACC	1920
ATGCACCAAG CCAATGAATT TATCGCCTTG GATGATCTTT TCCGAGCAGC AGCAATTTAT	1980
GCCGAAGCTA TTTACGAATT GATCAAATAA AACGATAGAA GTCTGAGATC TTATGCTTGG	2040
ACTTCTTTTT GGAGGGAAAG TAGATGTCTC AAATCGAAAG AATCAAACAG GCTATCATGG	2100
CGGATTCGCA GAATGCCAGC TATACAGAGC GTGGCATTGA GCCTCTCTTT GCAGCGCCAA	2160
AAACTGCTCG CATCAATATC ATCGGTCAGG CTCGGGACT TAAAACCTCA GAAGCAGGCC	2220
TTTACTGGAA AGATAAAAGT GGTGACCGCT TGCGGGACTG GCTAGGTGTG GATGAAGATA	2280
CCTTTTACAA TTCAGGTTAT TTTGCTGTTT TGCCTATGGA TTTCTACTTT CCAGGACATG	2340
GCAACTCGGG TGATCTTCCG CCTCGTACAG GTTTTGCGAGA AAAATGGCAT CCGCAGGTCT	2400
TACAGGAATT GCCTGATATT CAGTTAACCC TCTTGATTGG GCAATATGCC CAAGCCTACT	2460
ATTTACAGGA GAAATCAGT GGAAGGTAA CCGAGAGGGT GAAACACTAT AAAGACTATC	2520
TGCCAGCCTA TTTTCCGCTA GTTCACCCAT CACCACGAAA TCAAATCTGG ATGGCCAAAA	2580
ATCCTTGTTT TGAGGCAGAA GTAGTGCCAG ATTTGAAAAA AAGAATTAAA ACCATTTTAT	2640
AGTCAATGAA AATCAAAGAG CAACTAGGA AGCTAGTCGT AGGCTGCTCA AAGTACAGCT	2700
TTGAAGTTGC AGATAAACT GACGAAGTCG GTAACATACG CACGTAAGG CGACGCTGAC	2760
GTGGTTTGAA GAGATTTTCG AAGAGTATTA GAAGAAAAAG AATGAAAGAA ATAGCCTTG	2820
ACGCATTTTA CCAGCTTTAC CAAAACGACC AGCTTTCTTT AGTGGATGTG AGAGAAGTGG	2880
ATGAGTTTGC AGCTCTTCAT TTAGAAGGTG CCCACAACCT ACCGCTTAGT CAATTGGCTG	2940
ATAGTTATGA TTAATTGGAC AAAGATCGCT TGCATTATAT TATTTGCAAA TCTGGAATGA	3000
GATCGGCGCG TGCTTGCCAA TTCCTATTAG AACAAGGTTA TAATGTTATC AATGTCCAGG	3060
GTGGCATGTT AGCCTTTGAA GAACTTTAAA ATTTTGCAAT TCTCCTACTT GGTGTGGACT	3120
GGGTAGGAGA GTTTTATTTT TAGATAATTC TTATTTTAA GAAAATTGAA AACATTTAAT	3180
ATTTGCCTCG TGATGCTTTT TTCAGACTCC TAATCGTGGT ATACTAGGTC AGTATTTTAT	3240
AAATATGAAG GAGATTTTGA TGGCTAAAAA AGGTACCCTA ACAGGTTTGC TCCTGTTTGG	3300
AATATTTTTT GGTGCGGGGA ACTTGATTTT TCCGCCCTCT CTAGGTGCTC TATCTGGAGA	3360
ACATTTTCTT CCTGCCATCG CAGGTTTGT CTTTTCAGGC GTTGGTATCG CCGTCTTGAC	3420
CCTTATTATT GGAACGCTAA ATCCTAAAG ATATATCTAC GAGATTTCAA CGAAGATAGC	3480
GCCTTGGTTT GCGACTCTTT ACCTCTCAGT TCTTTACTTG TCAATCGGTC CATTCTTTGC	3540

1020

TACCCACGT ACTGCTACAA CAGCTTACGA AGTAGGGATT AGCCCCCTTT TGTCGGATGC	3600
AAATAAAGGA CTGGCTTGA TTGTATTAC GGTCTGTAT TTGCGGCAG CCTATTTGAT	3660
TCGCTTAAT CCATCAAAAA TCTTAGACCG CATTGGACGT ATTTTAACGC CAGTCTTTGC	3720
AATTTTGATT GTTATCTTGG TCGTCTGGG AGCTATCAAA TATGGTGAA CAAGTCCTCA	3780
AGCTGCTTCA CTGCTTATCA AGCTTCTGCC TTTGGTACAG GTTTCCTAGA AGGTTACAAT	3840
ACCTTGACG CCCTTGCCCTC AGTGGCCTTT AGCGTAATCG CAGTTCAAAC CTTGAAACAA	3900
CTTGGAATTT CAAGTAAGAA AGAATACATT TCAACTATTT GGGTTGTTGG TATCGTTGTT	3960
GCCCTTGCCT TCAGCGCTCT TTACATCGGT TTAGGTTTTC TTGGAATCA TTCCCAGTA	4020
CCAGCTGAAG CGATGAAGGG TGAACACCA GGTGTTTACA TCTGTGCACA AGCCACTCAA	4080
GAAATCTTTG GCTCAACAGC TCAACTCTTC CTTGCAGCTA TGGTTACCGT AACCTGCTTC	4140
ACAACGACTG TTGGTTTGAT TGTGTCAACA GCTGAGTTCT TTAATGAGCG CTTCCCACAA	4200
ATCAGCTACA AGGTTTATGC GACAGCCTTT ACCTTGATTG GATTTGCTAT TGCCAATTTG	4260
GGTCTTGATG CGATTATC	4278

(2) INFORMATION FOR SEQ ID NO: 154:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 1953 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

ACCCGATCAA ATGACAAAAG CTAACCTTGG TGTCGTAGGT ATGGCCGTAA TGGGTCGTAA	60
CCTTGCCCTT AATATTGAAT CTCGTGGTTA CACAGTTGCT ATCTACAACC GTAGTAAAGA	120
AAAAACGGAA GATGTGATTG CTGCCATCC TGAAAAGAAC TTTGTACCAA GCTATGACGT	180
TGAAAGTTTT GTAAACTCAA TCGAAAAACC TCGTCGTATC ATGCTGATGG TTCAAGCTGG	240
ACCTGGTACA GATGCTACTA TCCAAGCCCT TCTTCCACAC CTTGACAAGG GTGATATCTT	300
GATTGACGGA GGAATACTT TCTACAAAGA TACCATCCGT CGTAATGAAG AATTGGCAAA	360
CTCTGGTATC AACTTTATCG GIACTGGGGT TTCTGGTGGT GAAAAAGGTG CCCTTGAAGG	420
TCCTTCTATC ATGCCTGGTG GACAAAAAGA AGCCTACGAA TTGGTTGCGG ATGTTCTTGA	480
AGAAATCTCA GCTAAAGCAC CAGAAGATGG CAAACCATGT GTGACTTACA TCGGTCCTGA	540
TGGAGCTGGT CACTATGTGA AAATGGTTCA CAATGGTATT GAGTACGGTG ATATGCAATT	600
GATCGCAGAA AGCTATGACT TGATGCAACA CTTGCTAGGC CTTTCTGCAG AAGATATGGC	660

1021

TGAAATCTTT ACTGAGTGGG ACAAGGGTGA ATTAGACAGC TACTTGATTG AAATCACAGC	720
TGATATCTTG AGCCGTAAAG ACGATGAAGG CCAAGATGGA CCAATCGTAG ACTACATCCT	780
TGATGCTGCA GGTAAACAAGG GAACTGGTAA ATGGACTAGC CAATCATCTC TTGACCTTGG	840
TGTACCATTG TCACTGATTA CTGAGTCAGT GTTTGCACGC TACATTTCAA CTTACAAAGA	900
AGAACGTGTA CATGCTAGCA AGGTGCTTCC AAAACCAGCT GCCTTCAACT TTGAAGGAGA	960
CAAGGCTGAA TTGATTGAAA AGATCCGTCA AGCCCTTTAC TTCTCAAAAA TCATTTTCATA	1020
CGCACAAAGG TTTGCTCAAT TGCCTGTAGC CTCTAAAGAA AACAACTGGA ACTTGCCATT	1080
TGCAGATATC GCATCTATCT GCGGTGATGG CTGTATCATC CGTTCCTCGT TCTTGCAAAA	1140
GATTACAGAT GCTTACAACC GCGATGCAGA TCTTGCCAAC CTTCTTTTGG ACGACTACTT	1200
CTTGGATGTT ACTGCTAAGT ACCAACAAGC AGTACGTGAT ATCGTAGCTC TTGCGGTTCA	1260
AGCAGGTGTG CCAGTGCCAA CTTTCTCAGC AGCTATTACT TACTTTGATA GCTACCGTTC	1320
AGCTGACCTT CCAGCTAACT TGATCCAAGC ACAACGTCAC TACTTTGGTG CTCACACTTA	1380
CCAACGTAAA GACAAAGAAG GAACCTTCCA CTACTCTTGG TATGACGAAA AATAAGTAGG	1440
TCAGCCATGG GGAAACGGAT TTTATTACTT GAGAAAGAAC GAAATCTAGC TCATTTTTTA	1500
AGTTTGGAAC TCCAGAAAGA GCAGTATCGG GTTGATCTGG TAGAGGAGGG GCAAAAAGCC	1560
CTCTCCATGG CTCTTCAGAC AGACTATGAT TTGATGTTAT TGAACGTTAA TCTGGGAGAT	1620
ATGATGGCTC AGGATTTTGC AGAAAAATIG AGCCGAAC TAACCTGCCTC AGTCATCATG	1680
ATTTTAGATC ATTTGGGAAGA CTTGCAAGAA GAGCTGGAAG TTGTTTCAGC TTTTGCAGTT	1740
TCATACATCT ATAAGCCAGT CCTTATCGAA AATCTGGTAG CGCGTATTTT GCGATCTTC	1800
CGAGGTCGGG ACTTCATTGA TCAACACTGC AGTCTGATGA AAGTTCCAAG GACCTACCGC	1860
AATCTTAGGA TAGATGTTGA ACATCACACG GTTTATCGTG GTGAAGAGAT GATTGCTCTG	1920
ACACGCCGTG AGTATGACCT TTTGGCGACA CGG	1953

(2) INFORMATION FOR SEQ ID NO: 155:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6474 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

CCGGCAGTAC ACGAGCTTGG GGAACAGCCA CTGGAACGAT GAGGTGTGAG CTCAAAATAT	60
---	----

1022

CCTCCAGTTA TGTTTTTCCT AATAGTATAC CGGAAGAGTG AAAGGATTTT ATAATGGAGC	120
GGTTACAAAG AACCTACTTT CTATTAAACA GTATACTATG AAAATGTGAA AATTIAACAT	180
TTTTTTGTAC AAATTTTATA AATTATTGCC TTTTAAATAT CAATAGTTAA TCTCTTATCC	240
AGATCCCCCT TGTGTAAACT TTATCTTTAT AAGCTTCAAG GCCCCTATCC CATCTATTTG	300
CAACAATTAG ATCACTTTGT TTTGTAAATA GTTCAAAATT CTTTCAATA ATTACGTTAT	360
CTATACTAAC GTTTAAATTT GGTTCATATA CTAAAATTTT TATACCGACA ATCAATAGTT	420
CATTAATTAT ACTTAAAATA GCTGACTCTT TGTAATTATC TGAATTATAT TTCATCCCCA	480
ATTATATAT TCCTACTATC TTTGGCTTTC GTTCCAATAT TTGTTTAACT ATGAACTGTT	540
TTCTATTTGT GTTGAAATA TCAATCGCTT CTATCACTGG GGCATTTATT TCTATAAATF	600
CTTTTTTTAA TTGTTTAGTA TCTTTGGGAA GACAATATCC TCCAAATCCA AAAGAAGGAT	660
TATTATAAAA ATTTCCAATT CTTGGATCTA AACAAACACC TTTTATTACA ACTTCAGCAT	720
TTAAGCTTCT CCTCTCAGCA AAAGAATCTA GTTCATTAAA AAAGCAACAC GGAGAGCTAA	780
GAATGTGTTA GAAAAAGCT TAATTGCTTC TGCTTCAGTA GGAGAACTA ACATAACATT	840
TTTAATATTG GCAGTACTAT GAGTACTAAT CGAAGGAAC AACTCTGCAA TTTTCTTCC	900
TTCAACTGTC TCATCTCCAA CAACTATGCG ACTTGATAT AAATTATCAT ATATAGAACA	960
ACCTTCTCTC AAAAAATCAG GGACAAAAAT GATATTTTTT GTATCAAACA GCCTTTTTAA	1020
TTTGTTTGAA AAGCCGATCG GAACTGTGA CTTTAAAATA ATCTTTCCAT TAGGTTTTAC	1080
CCTCAGAAATC TTCGATACCG TTTGTTGAT TTCATATGTA TTAAACTAC CAATTTTCTC	1140
ATCATAATCT GTCGGAAGCG CAATAATATA ATAATCAATA TTATTTTTAA TTTCAGAAAA	1200
TGTATCAAAA AAAGTAATAT TTAAGTTATT CTCGCAAAAA AACTTCATAA GCTCTTCATT	1260
TTTAGATGGA AGAATGCCCT TTTTAAATT ATTTATTTTT ACAGAATCTA TATCATATGC	1320
AACAACTTTA TATTTAGATG CAAATAGTAA CGCGTAGGCC AGCCCAACAT GCCCCAAACC	1380
AATTACTGCT ATATTCATAA AACTACTTCC TTATTTCTTA ATCCAAAATC TAATAGAATA	1440
AGCTGCCCCA TTCCTTAAAT ACAACTCTTT AATATTGTTT AAAAGTTTTT CAACTGATTT	1500
CCAGATTATC AAAATCTGAG ATTTATAGCA CAATATTGAT GATATTCTAT CAATATAATT	1560
TTTTTCATCA AGTCTCTCTT GATACATTTT TAATTCTTTA GTTTTCCCA TATAACTAAC	1620
CATACTACTA TCACTTACAT ATGGGAAGTC CTCATAATAT ATTACTTTAT AACGCATAAA	1680
TTCAAGCGCC CTTCCAATAC TATTCACAAA AACATGAGCA ACATGGTCAC CAAGTGAAAG	1740
CGGACAATAT ACGACACATT TGTCGTCTAA ATGCATTAAAC AGCTCTTTTA TGATATCATT	1800
CTTTAATGTG TCCTCATTTT TTAATTCACT ATAGATATGA CGGTATAGAA AATTGCCATT	1860

1023

TCTATCTTTC CTATAGAGAC ATTCATAGTA CGATAAGTGT CTAAAATCAC ATTGTAGACG	1920
TTCAACAAGCT AACCTGTCTT CTTTCTTCCT TTCTTCAATC GGATATTTCC CAAGGTTACA	1980
CAACTTATGA AATTGCTTAG CAGAGGGCTG TAGCTGTGG CTCAAAGGGT AACCAGAAAA	2040
TATAGTAATA ACAAGTACAA TTTCTCCTTC TGAAGTTAAT TTTGAAATAT AATCACCACA	2100
GGAAAAAAT GCGTCATCTA AATCTGGAGA TAAAAAGATA TACTTAGTAT TGTACTCAT	2160
AACCATTCCC TCTACAATTT ATCTAAAAAC TACTAAGTG TCTGATTAAA TTCCACATCA	2220
TCAAAAAAT TCACCTTATT CTTAATAATG AATATTTTCGT TAAATAAACA TATATATAAA	2280
TATTTCAATA TCCTTTCAAT ATCATCCTCT AAATTCCTCT CAATATTTTG TATCAGCCCA	2340
TTTACAATCT TATTAAAAAA GATAAGCTCT TTATCTCTAA AATTAAATAT TTTCATACAA	2400
CTGTTGTATC GAAAAATATA TAAAAAATT TTTACTAATG TTTGAATATT TAAACAACATA	2460
AATAAATGAG TTGTACCCGG GACACTATTT ATGTTATCAA GAACACTATC TTGAAACCTC	2520
AACTCACAGT TCTTTTGTG AAATCTTTT TTATCGTTA GATCTGATAT TTTTITAGAC	2580
ATTTCAACAA TCTCAGACAT TTTATATGGA TATCTAGGAT GAATGCCAAA ACTATGCAAA	2640
ATGAACTGCA CCCCCAAAGT TAGACAGAAAT AAATCTAAT TTTGGGGTGC AGTTCATAAG	2700
ATTGGGATAT TTTTITTTAG CTAGAACTAG TAGAAATATA TAGTCAAATA ACAGATACCT	2760
TAAGGGTTTC TCATCTACAT AAAAAAATGA TACTTTTTC TCTCAGTAA TTACCTCATA	2820
AGCTTCACAA TAGAATCTCA TGTTTCCCTC CCCTATATTC TTAAATAAAA TCCTTTGGAA	2880
ATTGATATAT CTTAGTAAA TATTGTTTAA GTTCCGGATG CGGAGCATGG GTAACAATAA	2940
TGACAGTCAA ATCCTCTCTA TCTAATATCT TACGTTCAAT CGCTAACGAA GTTCTCCTAT	3000
CGATAGCAGA AGTTCCCTCG TCAATTAATA CTATTTTCTT ATTTCTAATT AGCCCTCTAG	3060
CTAAAGTAAT TTTTGTGTTG TGCCCTCCTG ACAGTAATCT CCCATCATCA CCAACATAAT	3120
AATCTAAAA GTTATTAGGA AAATCTTTTA CACTCAAACC AACTTGCTCT AAAGACTGTA	3180
GTATTTCTTC ATCAGTATAA TTTTCTTCCA ATAAAAATTT ATCTCTAATC GTACCTTCAA	3240
ACAAATAAGC TTTTGTATCT ACATATAGAA CATTGGAAC CATATTTAAA TAGGAGGTTT	3300
TTTTTATATC ATCCCCGAG AATCGCAATT CTCCACTATA ATCTCTCAA AAGCCATTCA	3360
ATAATTTTAA TAAAGTAGAT TTCCCGCTTC CACTTTCACC TAAAAATAAA TACTTTTCAT	3420
TACGTTGAAA ACAAAAATTT AAGTTTTTTA ATATTCTTT ATCTCCATAC TTATAGCAAA	3480
TATTTTGTG TTATATAAC GGAAAAATCT TATTCACCTC ATTTGGTTCG ATATCATTCA	3540
TTTTATTGTA CTCAATTGGA TTAATTGAAT ACAATTTTAA AAAAAATAGG TCGTACCAA	3600

1024

TAATAGAGGA TAATTGACCT CCTAATTCAC CTAGCGCTGT AAAAATAACA CCTGTTAGTG	3660
CTCCTATTGC TTCAATAGTA CCAATTTTCA CTATTCCTTT TATTGCAAGA TAGCCTGTTA	3720
AAAAAACGAG AGATATCTGA AAAAAATAT TGAGAAAGAA GCTAATAGCG CCTGCTAACG	3780
TTTCTACAGT TGTCTTCTT TGTATAACCA TCTTTAATAA AATTCCTGCT TCTTTAATTT	3840
TCTTAGGCAA TACATATAAA AGATTCAAGG ACGCTAACAC ATCAAAATCCA TTCAATATAG	3900
TCTCTAGTA TTTTAAAAA GCTTCATTTT GGTAGTTAA ATTTAGACTA ACTTCTCGCA	3960
TTTTCGATGC AAAGATTTT GGTACAAGTA GCATAATCAT TAATGAAAAC AAGGTGGCTA	4020
CAGTCAATGA CCAATGATAG TGATTAAGAG TCACAACTGC AAATATAGTA CCAGAAATTC	4080
CTTTTATTAC TAAAAAAGT TGTTTAAACG CCTGATCATT TAAAGTCTGA ACATCATTAT	4140
TTAGCCACGA AAGATATGTT CCTGATGATT TACTATGAAA TTCTTGATAG GTAGAGTTAG	4200
AGATGTCTGT GGCAACTCTA TTTGGAATCT CTAGATTAAA CTCTTGATC ACTTCAACCT	4260
GATAATTTTT CACTACCCAG TCAAGGAATA TTATCCACA CCAGACAATC ATTTGGTAGA	4320
TTGACAATTT CAAAAACCGC TCTAAATCA TCGCAATTAA TTCATTCAAC ACCAGAGCAT	4380
TAATAGTTGC TGCATAAATT AGCAATAATT GACCAGCAAC AATAAATATC GTTAATAAAC	4440
TAAATTTTTT TATATTTGAT TTTATAATAG TATACACAAT AGTTTCTCAC TTTCTAAATT	4500
TTAATTGAAC ATAGTTTTCA TATATACAAT AGAAAAACC AAAATGATAT AATAACATAT	4560
ATTTCAAAA AGAAATTCGT TAAAAATTTT TTCTTCTCTT GCCTTCTTGA TTACTTTTAA	4620
AGCCTTGCAT TTGTCTCCTA TTAATAGTAA CCGCTTTATG TTTAAAGAAT AATATTTCTT	4680
TGTAACCAAT ATTCTCTCGT TGAAACTCAA TAAATTAAAA TATTTCTTAC AGTAATTATA	4740
ATATTCTTCA TCTGCATTAA TTGTTTTTTG TGTCACTCCA GTGATACCGT TTTCTTTACT	4800
GTGAGCGTAG TAATTCACCA AGAATTCTCG CACTATATCA ATTTGGTATC CTTGAACAAG	4860
TAGTTTTAAT AAAACAACAC CGTCCCTGATG TGAATCTATT TTCTCAAAAC CATTAAATTAA	4920
TTCTAGCACC TCTTTTTTAC ACAACCAAAA TGACGTACCT GCTATATTGT GAACCATTTG	4980
AACAAACAAG GGATTTCCAA CAAAATCGGT CTTCTCCTCT TCTCGGTAC CATTTGGATA	5040
AATTATTATT CCATAACTAC AAATAAAGC TAAATCTTC ATTCTACTCT TTTTAAACA	5100
AGCCATCAAC TTTAAATTC GATCTGGCAT ATATTCATCA TCATCGTCTA AAAATGATAT	5160
ATACTTACCT CTAGAATTTT TGATACCTAT GTTCTGGCA TTAGTTGCAC CTAAATCTTC	5220
ATTACTTAAA ATTAACCTAA TTCTATGATT GGTATAGCCA AATTGATGGA TAATTTTATT	5280
TCTTAAATTT ACATTACTAT AATTATCATC AATAATTATA ACTTCGATAT TTTTATAACT	5340
TTGATGTAAA CAACTTTTCA CAGCTCTAAT CAGAGATTCA TACCTATTAT GTGTTGGTAT	5400

1025

TATAA TACTT ACTAATTCTT GATCTATATT CCTATCCATG ACTACTCTTC TCTAATAATT	5460
CATCATATAC TCTCATGGTT TCTACAAACA TTTTGTGCAC AGAAAAATGT TTTCTTATTT	5520
TTGATTTACT ATTCTCACCT ATATATTTC AATACTCAGA ATCATTGAGT AAAAAATTAG	5580
CACAAGCACA CACTCCCTCA ACATCTTCCT TCTCAAATAA AAATCCATCA ACCCTATGTT	5640
CAATAATTTC ACTTAACCCG CCAACATTAC TAGCTAAAAC CGGAGTTCCT TGTGACATTG	5700
ACTCTAAAAC ACACATAGGT ATTCCTTCTG TATCAGAAGG AATATACAAT AAATCCGATA	5760
TTTGTTAAAC TATAGTAGCT GGATAGATTT CACCAAGTAA CCTGAAATTA TCTCTACATT	5820
TCAAATGGCA AATTTTCTT TCAAAGCAG CCCACATACT ACCATTTCCA GCCATAATAA	5880
AAATCACATC TCTCTGACT AAAAATAATT TTTCTGCAA TTCAAGGAAT CTATCCGGCC	5940
TTTTTCTGG ATCCAACCTT CCAACATAAC AAATGATTTT TTGTTATTTG GAATACAAAA	6000
TTCTTTTTTA AAGTCTTGAA CACCTACTAC ATCTAAATCG CTATTTGATA CATTAAATTC	6060
GTTATTTATT GCAACTATCT TCTTATTTT TATTATACTC TCCAATCTTT TTTTTCATAG	6120
TTTCAGATAC ACAAATAAAA GCATCTCCA TAGAATATGT CCAAAAATCA AAATAAGTCA	6180
AGAATTTCTT TTTTAAGTTA TATTCAACCC ATCCATGGCA TGTTATCACT GTCTTAACCT	6240
TTCCAAATCC ATTCTTGTC AGTTTTTTTA ACATATATAA AAAATAATTA GTTGAGTAGC	6300
CATGACAGTG TATAAGTTGG ATTTTAAATA ATTTTAAAT ATTTTAAACG TGTAAAGCAG	6360
TTTCAAAAT ATTTGAACAT TGAGTACAAT CAACATAGGC AATATCTAAA TTTTATAAT	6420
CATCAATAAC CTTTGAATCT CTAGATACAA TTATCAAAAT AGGGAATAGA GACA	6474

(2) INFORMATION FOR SEQ ID NO: 156:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4792 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

TATTTAACGA TTTTTCAT GTCATTCCT CAAAATAGA ATACCTTATA ATCTTAACAG	60
AAAAAGAGCA TTTACGCCAT TATATGATAT CTATCTCTGT GATAAGTTT TTTTATGGGT	120
AA'TTTAAAG ACCAAACGCA AGATGGCAAT CAAGACCACT CCAAAGAGAA CTGTTCCGAC	180
TAGATTGCGG TAGCGAAAG CTACCCAAGC TGTGGAAAG ACGGCTAAGA AGTCCAGTCA	240
TTTGATTTGA GGAAGACTGC CAACCTFACC TGTCCTACG CTTGAAAGAA TCAGGGCAAA	300

1026

GATAATGGAA ACAGGCAAAA ACTTCAAAAA ACGCTCAACA ATCGCAGGCA GGCCCTTATA	360
CTTGACCAAG ATGAAGGGAA TCATACGGGG AATCCAAGTC ACCAAGCCAG AGAAAAATAAC	420
TGCTAATAAA AGATACTTAC TGACCATCTA AAACCACCCC CATGCTACAA CCAAGTAGCG	480
TCGCAACAG AACAGCTAGT GACTGAGACA TCACTGTCAA GAGCAAAAAG AAGGACACCG	540
CAACAACTGC TAGGATAATG AGCAGATTGC GGACAGGAAT CCGTCTTTGC ATAATCTGAA	600
ATTGCGAAGC AAAATACCAA TAAACATCCC AACCAGGGCA AAATCCAAGC CAAAGATTTC	660
TGGATTGGT AGCAGGCCAC CCAGAGCCGT TCCGACTACT GTCCCCACAA ACCAAGCCAC	720
ATAGCTGTTA AGATTGTTTC CGTGCATCCA CATAGGATTT ACCTTGTCTG TATGGGCCAA	780
TTCCCCATC AAAACGCCAT AGGTCTCATC TGTCAAGATA CTAGACATAC CGATATTGTA	840
CCAAAGACTG GTATGACGGA AATAAGTCGA TCGGTGTAAA CTCAACAAAA AGAGACGCAA	900
GTTGATTAGA AAAACCGTCA TAGCAATAGC TGCCACAGGA GCTTGAACCA CAATCAGTGC	960
CAACATGGCA AACTGGGCAC TCCCAGCATA AACAAAGAGA CTCATCAAGC CCATCTCAAC	1020
AGGTGTCACA TAGGGCGCAC CGATAATTCC ACAGGCCAGG CCGATACTGA CATAGCCAAG	1080
AGCCGTTGGC ATGGCTGCCT GCGCCCCCTC CTAAAATCCT TTTTCTTTCA TCTTCTCCT	1140
CATATTGTCT TAATAATACT CAATGAAAAT CAAAGAGCAA ACTAGGAAAC TAGCCGCAGG	1200
TTGCTCAAAA CACTGTTTTC AGGTTGCAGA TAGAACTGAT GAAGTCAGCT CAAAACACTG	1260
TTTTGAGGTT GTGGATAGAA CTGACGAAGT CAGCTCAAAA CACCGTTTTC AGGTTGTGGA	1320
TAGAACTGAC GAAGTCAGTA ACCATACCTA CGGCAAAGTG AAGCTGACGT GGTTTGAAGA	1380
GAGTTTCGAA GAGTACAAGT AGGCTGAAAA GAATCCAACC ACAGCATGGA CTATTATATA	1440
GCAGATTGAA ATAAGATGAG AACAAATCGA TTGGGAAAGT AAAATTAATT TCTATAAATG	1500
TTTTAGCAAT TGTTTCGTAC TATTTTAGAT TCAGTCTATT ATAACACATT CAGAAAAGAG	1560
AAAAAGTCT GTTGATTTTC ACCATCATAA AAAGACTGGC AATCCAGTCT CAAACATATA	1620
TTATAGAAAT TCTCCACTAA ATACTTTCAC GAATATTCAG AAGCATAACA AAGGCAACTA	1680
GAAGAAATAG CAATAAAACA AAGCTAACTG CCAGAGTTCC AAAGCTAGTA GCAATGGTTA	1740
CCAAAGCTAT TGTAATAAAG CTAGGTAAAA CAACCGTAAT GGCACCGATA GAGGATTGAA	1800
CTGCTCCCAT TGAATCCTCA GGTATTTGTT TAAAAACGAG TTCTTGCAAT CTAGGAGAGA	1860
GAACACCTGC GAAAAAGGCA TCCAAGGTAC TAAAGATGAG AATCCAGTCA AAACGAACTG	1920
TGGCAAATCC TACTAGAAGA AGCAACTGGA TGACAAGTGA GGCATAGAGA GCTGTTTTTA	1980
TGGAAATGGT ATGTTGCAGA TAGCCACTTA CAAGGCTTCC GACAATCAGG GCTGATAATT	2040
CTAGTGTGGC TAACAAGGCA AGAGATTGAC CAGTTTGTA ATTCAAAAAG GGCTGGTTCC	2100

1027

TTAAAAATAG AGTGGAATA GGAACCGTAA CATTTATCAC TGCTTGACTA GTAGAGATAA	2160
TAAACAAAAC CAAGAGCACC TTATTCATAT TCCATATCAA TTTGATGAT TGGAGCAAAT	2220
GCTGGCAAAA GGATTTTACA GAGAGTCCTT CTTGATAGCT AATCGTTTTT TCTACTTTCA	2280
AGAGGTCAGT TTTTATGAAG AGGATACCTA AAAATGCGAT TAAAAAGGTA AGAGCGTTCA	2340
GTAAGGAAAT AAACCTGGATG GATAGAATGC CTAGTAAGAC TCCTCCTAGG ATATTACTGA	2400
TTGTTTTTAC TAAACTAACA GTTGACTGTT TAAAGCCAAAT AGCTTCTGCC AGATGGTCTT	2460
GCCCAATAAT TCTAATGAAA ATCGGAGTGA GCATGGCGCC TGAATAATAA CTCAATGTGT	2520
CAGACAAGAG GTTAATCAGA CAAATAAATG CTACTAGCAA CAAGGAGAAA GACTGCCCTG	2580
AAAGTGATAA AGACACTATA GAGTAAAGCA AAAATTTTGC AAAACTAATG ACTGTGTATT	2640
TCAAGACACG ATGATGTTGA AAATCCGCCA AAATCCAG AAAGATTTGT AGAACTTGGG	2700
GCAGGGTTTC TGAAATCGTG ATGAGTAAAA TCGCCAAAGG GGCAAAAGAT GCATCTGCCA	2760
CATAATTGAG GAAGGCCAGA TAAAAAATCG TATCCCAAG CGTTGAAATC CACTGGTTGA	2820
TAGTTAATTG CCTAAATCT CTATTTTGAA GAAATACTTT CATCACAACT CCTTCTTAAG	2880
TTCAAAATGGG AATCTTTCCC CAAGGATAGA CCGCGATACT ACTAACAACC AAAATTACAG	2940
TAACATCAA AGCTGACCAA TGCCATTGTA GACTATATGC AGTCCAATAG GCCAATAAAT	3000
TGACTTTGTC ATTCTAAATA AGACTGCAA TATAAGACCT CCACCCATAT AGAAGACAAA	3060
GTCTGTCAAG ACCCAACCGT GATTACTAAT GTGCGAGACC CCAAAATAAA CAGCGGAACC	3120
AAGTACATCT AGCCCCATT TCTTTCCTTT TTCCAGAGCA GTCATCACTA ATCCACGATA	3180
AATCATGTCT TCAAAAATGG GACCTGCAAT CACAGGATAA AAAAATACA TCAAAAATGC	3240
TGTAGCCCCT GTAAAAGTCG GAGCAGCATG TTGATAAGAA ATTTCAATTC GAGTAGGTGG	3300
GAAAAGAAAA AAGGTAACGA AATCCAAAC AACAAAAGCA AGCAGAGCTA GGAAGGAATA	3360
GAAAAGATAG GATCCTTTAA ACTTCTACT ATTGATTTTC TGCCATTTCC CCGACCAAAT	3420
CATAGCAATA AGAGCAAATA AAACCACAAG AAAATTCAAC ATCATATCCG ACAGATAATA	3480
GGCAAAGTCA GATAGCCCAG TAACAAGGTC GCTGCGTAAA ACTAGAACAC TGAACCTCTG	3540
GTCAGCAATA ACTAGTAGAA AAACATAAT AAAGTAGCGG TGTGAGATTA TCTTTTTCAT	3600
ATATCACCTT TCTAATATCC AAATACCAAT AAAGTAACAA TGAGTAAGAA ACTATTCCAT	3660
GAAGCATGCA GAGCTATAGC CCAATAGATG GATCGGTTGT AGCGAAACAT CATACAAAAT	3720
ATCAAGCCCA TTCCAAAATA CTTTATGAAA TCTGTCGTTA TCCAACCATA CTGCAAAACA	3780
TGCATAGCGC CAAATATGGC AGCGGAAACA AGAACATCAA GATAGTATCT CTTAACCTTA	3840

1028

GATAAACTTG TCATCAAAAG ACCACGACAA ACAACCTCTT CTGATACAGG TGCGATAATA	3900
CTAGTATAAA GTATTTCGCGT AACAAAATAG CTAATTCCTG TTAAATTGGT GGCTACTTCT	3960
ACGACTGTAC TTCCATTCTG GGTACGAGGA AAGATATAGG TTGTTAGATT TGCCACACG	4020
AACAATAAGA AAAAGAAAAG AAGGAAAACA CCCAGGTAAG ACCAACGAAA CTGGAAACGA	4080
CCACACTCTT TCCAATGTTT ACTTTTGACA AAAGCAATTG TAGCTATAGT TCCCAGAATA	4140
ACTACCAATA AACTTGGA CACATAGTAC ATATTATCAG ACAAAGCAAC CATAAAATCT	4200
AAGTCTGATG TGACATTAAA AATGAGGTAA TAAGTCAAAA TCAACAAGCC AGTTGCTAGG	4260
TGAAATTTCA CTTCTTTCAT TTTCTTCATC CTATTATCTC CTATAAGAGC CTATCTTCTA	4320
CGGCGGCCAA ACAATCCATC TGCTAAATCT ATAGTCCAAT CAAAAGCTCC ACGATTAGGA	4380
CTCATCCCTT GATTGCCCCA ACCAGGGTAA ATTCCTGGGA CGCCCCAACC AGATATACCA	4440
CTTCTTCCAC CACCTCCCAT AGAATTTACG AGGTTGCCTC CTCTAACATC TTGCAACTCA	4500
GCTTCTGTCA ATTCCATTGT TTCTGCAAAT TGTAATTTTA ACATCTTTTA CACTCCTTCA	4560
ATTATCTTCA TTGTAAACC ACTTCTGCGA CCTAGGATTT GCTTCAAGTG CTTTACAAGT	4620
ACAGTATAAC ACGAACATTG GCTTATTTTA GAAATCGCA TATTTGATAT TTTTCTTAT	4680
AGAAATTTCA GATTTGCGAT TTTGGTGAAT TTGATTACTT CTCTGCTATA ATAAAGTTAC	4740
TACTAATGAG GAGTGCAGAA ATATGAAGAA ACAAATTTTA ACATTATTGA AA	4792

(2) INFORMATION FOR SEQ ID NO: 157:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2156 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

CCGTTCTCGG CGACGGCCAT CTGATGAAGC TATTTATGAG GGAACTGGC AAGCTGGAGA	60
CTCAGAGTAT CTAGTCTTTC ACCGATTGCT GTGGCAGCAG ATGTGCAGGG AAAAGGAGTT	120
GCTCAAACCT TCTTAGAGGG CTGATTGAA GGTTTTGATT ATCTTGATT TCGCTCAGAT	180
ACGCATGCTG AAAACAAGCT TATGCAACAT ATTTTGTAAA AACTTGGTTT TAAACAAGTC	240
GGTAAGATGC CAGTAGATGG CGAACGCTTG GCCTATCAAG AATTAAAGAA ATAATGCAAA	300
AGAAGTATGT AAAAATCCTC TACTCCTCAC CAATTGCTAT TCTATCACTT GTAGCTGATG	360
ACCATATTTT GTATGGAATT TGGGTCAGG AGCAGAAGCA TTTTGAGAGG GGAAGTAGGAG	420
ATGAAACGAT AGAAGAAGTT GTTAGTCATC CTATTTTAGA CCCAGTTATT GCTTGCTTAG	480

1029

ATGATTACTT TAAAGGCAAG CCTCAGGATT TATCCAACCTT GCTCTTGGCG CCAATCGGAA	540
CGAATTTTGA AAAGAGAGTT TGGGACTATT TACAGGGCAT TCCTTATGGT CAGACAGTGA	600
CCTATGGACA AATTGCTCAA GACCTGCAAG TGGCTTCTGC TCAAGCAATT GGTGGAGCAG	660
TGGGACGCAA TCCTTGGTCT ATCCTAGTAC CTTGTTCATCG TGTGTTGGGA GCAGGCAAGC	720
GTCTGACAGG TTATGCTGCA GGAGTGGAAA AGAAAGCTTG GCTCTTGCAG CATGAAGGAG	780
TAGATTTTAA AGATAGAAGC AATAGAAGGA GAAGCACATG TTAGAATTTA TCGAATACCC	840
CAAAATGTTCA ACTTGTAATA AAGCAAAACA AGAATTAAAT CAATTAGGTG TGGACTATAA	900
AGCCGTCCAT ATCGTGGAAG AAACACCTAG CCAAGAAGTC ATTTTGAATT GGCTAGAAAC	960
CTCAGGATTT GAATTGAAGC AATTTTCAA CACCAGTGGT ATCAAATACC GTGAATTAGG	1020
GCTAAAAGAT AAGGTAGGAA GTTTGTCAA CCAAGAAGCG GCTGAGTTGC TAGCAAGTGA	1080
CGGTATGTTG TTAAAACGGC CCATTTTAGT AGAAAATGGA ACTGTTAAGC AAATCGGTTA	1140
TCGAAAATCT TATGAGGAAC TGGGACTGAA ATAGTTTSTA TCTATCTCTT TGATAGATAA	1200
AATATATAAC TTCCCTGTTT CAAAGTATGA TAAACTAGTA GGTAGACAAA GTCTGTATCT	1260
GACCGTAGCA AATAATTTCA TTGACGGCAG AAGCATGGTA GCATGAATCA TTATCAGAAG	1320
AGGATGTTTT TATGAATGTT ACAACGATTT TAGCATCAGA TTGCTACCAA AACTTGATGC	1380
AATTGATGCC GGATGGCAAG CTGTTTAGCC TACGTTCCGT CTTTGATGGA ATCCCTAGAA	1440
TTGTCCAACA ACTTCCAACA ACAATTATGT TGACAATTGG TGGTGCCCTT TTTGGCTTGG	1500
TTTTGGCGCT TCTTTTGGC ATTGTGAAGA TCAATCGTGT CAAGATTTTA TATCCCTTGC	1560
AGGCCTTCTT TGTTAGTTTC TTAAAAGGGA CACCGATTTT GGTGCAACTC ATGTTGACCT	1620
ACTACGGAAT CCCTTTGGCT TTGAAAGCCC TCAATCAGCA ATGGGGAACT GGTCTCAATA	1680
TCAATGCGAT TCCAGCTGCA GCTTTTGCGA TTGTGCGCTT TGCCTTTAAT GAGGCAGCTT	1740
ATGCTAGTGA AACCATTCTG GCAGCCATTC TCTCAGTTAA TCCTGGTGAG ATTGAGGCGG	1800
CACGCAGTCT GGGTATGACC CGAGCGCAAG TTTATCGACG AGTGATTATT CCTAATGCAG	1860
CGGTGGTAGC TACTCCAACC TTGATTAATT CCCTCATCGG TTTGACCAAG GGAACATCTC	1920
TAGCTTTTAG TGCGGGTGTG GTGGAAGTCT TTGCCCAAGC TCAGATTCTA GGTGGAGCTG	1980
ATTATCGCTA TTTTGAACGC TTCATCTCCG TTGCCCTTGT TTATTGGGTA GTCAATATCG	2040
GAATTGAAAG CCTCGGTCGT TTCATCGAGA GAAAAATGCG TATTTCTGCA CCTGATACAG	2100
TGCAACAGAT GTGAAAGGAG ACCTTCGTTA ATGATTAAAG TTTCGAATTT AAGCAA	2156

(2) INFORMATION FOR SEQ ID NO: 158:

1030

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3140 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

GTATCTCTAC ACATGTCTTC AATCGATTTT GTTGTCCTCC AATTTAATTC CTTATATGCT	60
TTGTCTGCAT TTGCATAACA AGTTGCAACG TCTCCTGAAC GTCTTGGAAC TATTTTATAA	120
GGAATAGGGA TCTTATTAAC ACTTTCAAAT GTATTTACAA GTTGTAATAC ACTAGTGCCT	180
TCTCCCAGAC CTAGGTTATA GATATAAACA TCTGTTTTTT CAGATACTTT TTCTAAAGCT	240
TTTATATGTC CTATTGCTAA ATCTACTACA TGGATATAAT CACGCACACC AGTACCATCA	300
AGCGTATCAT AATCATTTCC GAACACACTT AGCTCTGATA GCTTACCTAC CGCTACTTGT	360
GCAATATAAG GCATCAAGTT GTTAGGAATT CCTGAGGGAT CTTCCCAAT CAAACCAGAC	420
TCATGAGCAC CAATTGGATT GAAATAACGA AGCAACGCAA TACTCCATTC TGAATCTGCC	480
ACATGAACAT CTTTTAAAAT TTGCTCAAGC ATCACTTTTCG TATACCCATA AGGATTTGTC	540
GCACTTGTTT GCATCGTCTC AATTAGAGGT GACTGATTGT TAATTCATA TACAGTCCCA	600
CTTGAAGAAA AGACAATCTT TTTAACATTA AATTCTGACA TCACTTCAAC AAGTGCCAAT	660
GTACTCATAA TATTATTTTT GTAGTACATC ACAGGCTTTT GCACGGATTC TCCGACAGCT	720
TTATAACCTG CAAAATGAAT TGCAGCATCA ATCGATTCTT GTTCAAATAC CTTTCTCAAT	780
GCTTGTTTAT CACAAACATC TAATTCGTAA AACACGGGAC GTATTCCTGT AATTGCTTCA	840
ATACGGTCTA GCACCAAGAT GCTAGAGTTC GAAAGGTTGT CGACAATGAT AACTTCCTTT	900
CCTAAATTTA GTAATTCTAC TACGGTATGG CTACCAATAT AACCAGCTCC GCCTGTTACC	960
AATATTGCCA TCTGGGTTTC CTCCTAATTA ATTCCAACCG ACTTAACAAA TCTCATAAAC	1020
GCTTCATGCC CAGACGGTGT ATTCTTATAA ACTCCTGCAT CTTCCAGAAC TCTCGCAAAAC	1080
ACTTGTCTCG CTTCTGTTTG AACTACGCTA TTAACCTCTT CTTTATTAAT GCGAGGATAT	1140
TTTTCTTTCA ATTGGTCGGC CCATTCTAAA TGATAATCCG CAATTGCATT ATCCTCTCCT	1200
AAAAGATATT TTCCAACCTC TTCTAACTCT GGTTCCAAAC GAGGTGGTAA TATCGCAAGT	1260
CCCATCACTT CGATTAAACCC GATATTTTCC TTTTAAATAT GTTGATACATC TTGATGAGGA	1320
TGGAAAACAC CATCTGGGTA TTGTTCAAGT GTATGATTAT CTCTTAGAAC AATATCTAAT	1380
TCGTATCTCC CGTCCACTTT ACGAGCAATA GGAGTCACCG TATGGTGTGG GACATCTTCA	1440
GTCATAGCAA TGATGTCTAC TTCTAAATCT GAATATTCTC TCCACTTATT TAGAATTTTA	1500

1031

GTAGCTAAAT CTAACAAGCG ATTTTATTTT TCACTTTGTA ACCTAATTAC TGACATTGGC	1560
CATTTTACAA TACCAGCATT AACATCCTCA AAGTCTTTAA AACAAAATTC ACTCTCAAA	1620
TTTGCTTTTT CCATTGGGAA AATATGTTTC CCTCCCTGGT AGTGGTTATG ACTAAGAATG	1680
GAGCCTCCTG AGATAGGAAG ATCAGAATTT GAACCAGCAA AATATCCTGG CAAAATATCA	1740
ACAATCTCCA ATAATTGTTT AAATGTTTTA GAGGTAATAG CCATTGGTAC ATGTTGACTA	1800
TTCAAAAATA TCGCATGCTC ATTAAAGTAT GAGTAGGGAG AATACTGGAA TCCCCATACT	1860
TCGTCACCAA GTTTCACCG AATAATTCTA TGATTGGAAC GTGCTGGATA ATTTATTCGC	1920
CCCTGATATC CTTCAATTTT CATACATAGT AAACATTGGG GATAATTAGT TGCTTTTACT	1980
AATTTTTCAG CAGCAATTGT TTTTGGATCT TTTTCGGGTT TTGACAAATT TATCGTAATC	2040
TCTAGCTCTC CGTATTTAGT TGATGCTCGA AACTCAATAT TCTTAGCAAT AGCAGAAGTT	2100
TTAATATAAT CACTATCTTT ACTTAACTTA TAAACTCTT CAACTGCTTC TTGAGGTGAT	2160
ATATCATATG AACTCCAAA AATATCATTT AATCGACTAG GTAAAGGAAC TATGAAATTC	2220
ATTAACTCTG TCCTTAAACA TTCCTTTTCC TCGATTAAAT CTTTAATTTT ACCGTTTTTT	2280
AAGGCGATTT CCACTAAGTA ATCTTTTATT TGTTTCAGGT CATTTTCATC GGAAATGCGA	2340
TCAATTCCTT CCTCACCTAT TAACGCTAGT ACTCTATTTT TCACATATAT TTTGTCAATT	2400
TCATTATACA TTCCGTATTC AATTACTCTA TCAACAAAAT TATCAATAAT TGTTTTCATA	2460
TATTTTCTTT TCTAATTTAT GTTCCCATAT TTTCTATACA TTATCCATTT ATAAATTGCT	2520
TGCGTAGTAT GAGCAATTTT ATCAAGGTGA TGAATAATAT CTAAAGCACT AATTACTTCA	2580
GAAACGTTCC CATCATCTTC AAATATGTAA TTCATTATTT TCTTTTCCAT ATTTATACTA	2640
AGCTCTTCTA TCTCATTTCTG TTTTGTGATA ACAACCATAT CTAAACATCC AGATTGTTCC	2700
TCTCTATAAC AAGATATAGC CCTATTCATA TGCAGTCCGA TAACTTCATG AAGTATTTTT	2760
ATTTTGTGAA TAATTTTCTT CAAAATTTCA TTATTTTGAA GAATCTGTAG ATTTTTTAAA	2820
ATTTCAACAA TTCTATCCCC AATACGTTCA ATGTCAGTTG ATATTTTAT TACACTAATA	2880
ATTCTTCTTA AGTCATATGA AACAGGATGT TGTAAACAAA TTAATCATA TCCTTTCTTA	2940
TCAATATTTA GAACTGACTC ATTTATGATT AAATCTTCTT TAATCAATTC TACTCGTTCT	3000
TCATTTGATA AATATTCAAA TAACTTCTCA TATTTATCAA GCACAGATAC CCAAATGGTC	3060
TCTAAATTTT TTGATAATTC TATAATTTCA TTTTCTAAAT ATAACCTTAA CATTTAGGTA	3120
CCTCTTCTTA ACAAAGTTCTG	3140

(2) INFORMATION FOR SEQ ID NO: 159:

1032

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 9048 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

CCGGATGATT TCCTGGTCAG ATAGGGGGAA AGTGACTTCC TCAGCAATCG CGCGTAGAGT	60
AGGATTCCCT TCACGGATAA TATCGTTCAT ATCAATTAAG TGAGCAGCTT TTGTAATACG	120
TTCTATTGCA GACATTTTCT CTCCTTATAT TATGTTTAGT GCAGTTAGCT ACTGCCAAAG	180
CCCAAGTGGT ATACTTGGAA TAAGCCACTG TGGATTAGTT CATTTTCTTT CATTACCTCT	240
ACATGATATC ACAAATGAC AAGAATTGAA AGCATTATGG CATTTAGGAT TTATAGAAAA	300
TAGATAGGAA GTTCAATTCA ATGTGAAAG AAATACTTAT CTGTGATATA ATAAAAAGAA	360
AAGGCTTGCA TAAGAAAGTA GGGAGAACGA AGATACAAAG AAGACAAAAT CGAAATCAGG	420
GTGGTTTAGC TTTTCGTTTT ATGAAGGGCT TGGTAACTT TTTAGGAGTT ATCGCAAGTG	480
GAGCAATAAG GGATTGTGG CGATACTCTT GCTAGCAGTT GGTATTATCA TGGGCTTGGT	540
CTTGTTCTTT GAAAGCTTCC AAGGAATCCC TTGACTAGTC AAAAACGAGA TACTATTTCT	600
CAAGAGGGGA CTAAGCAAAA GTCTCAGGAG TAGGAAGAGG AAAAACTGC CAGAAATATG	660
GCCCACGGG ATTTGCTCTA CCACGATGGA CTTTCTTTT CAGCTAAAAA AGAAGACGGT	720
ACCTATGACT TTCATGAAAA TTTTGAGTAT GTGACTCCTT GGCTCAAGCA AGGGGACTAA	780
GCAGCAGATT TAGCTATTGG TGATTTTGAA GGAACCATTA ATAAGGATCA TTATTTAGCG	840
GGTTATCTTC TCTTTAATGC TCCTGTTGAA GTTATGGATG CTATTAAGGA GGCAGGTTAT	900
CATGTGCTGG ATTTAGCTCA TAATCATATT TTGGATTTCG AAATTGAGGG AGTTATTTCA	960
ACGGCCGATA TTATTGAGAA AGCTGGAATC ACTCCAATCG GAGTTTATAC GCACGAACCA	1020
CGTGATCAGG CTCCGCTGGT CATTAAGGAA GTGAATGGTA TCAAGGTTGC ATTGTTAGCC	1080
TATTCCTATG GTTTCAATGG AATTGAGCAG TATATTTCTC AGGAAGACTA TAATCGTTAT	1140
CTTTCAGATT TAAACGAAGA TAAGATGAAG GTTGAAATTG AACGGGCAGA GAAGGAAGCA	1200
GATATCACCA TTATCATGCT TCAGATGGGT GTTGAGTATC GATTGGAACC AACTGAAGAA	1260
CAAAAAGCTC TTTATCACAA GATGATCGAT TTGGGAGCGG ATATTATCTT TGGAGGGCAT	1320
CCTCACGTTG TTGAACCATC TGAAACGGTT GAAAAAGATG GAGATAAGAA ACTCATTATC	1380
TATTAATGG GGAACATCAT TTCCAATCAA CGAATTGAAT CTATGGGAGA TGAAGAGAAT	1440
GCTAAGTGA CTGAACGTGG TGTCTCATG GATGTCACCA TCAAGAAGAA GGATGAAAA	1500

1033

ACAACTATCG GAACAGCTAA AGCTCATCCT ACTTGGGTCA ATCGAACACC AAAGGGAACC	1560
TTTTCACCAG AAGGATATCC CTTGTATCAT TACCAAACCTT ATATTTTGGG AGATTTTATA	1620
GAGGATGGCA GTCATCGTGA CCAGTTAGAT GAAGCGACTA AGGAACGAAT TGATACAGCC	1680
TATAAAGAAA TGAATGAACA TGTGGGATTG AAGTGGTATT AGCTTGAATC CAGAGGAAAAG	1740
TAAATGATGA TTAAGGTAAT TGCGACAGAT ATGGATGGGA CCTTGCTGGA TGCTAGAGGT	1800
CAGCTTGATC TCCCACGATT GGAAAAGATT TTAGATCAGT TGGATCAAAG GGGCATTCTGT	1860
TTTGTCAATG CGACGGGCAA TGAATTCAC CGCATGAGAC AACTACTGAG TCCCTTGGTG	1920
GATCGAGTGG TTCTGGTTGT TGCTAATGGC GCTCGTATTT TTGAAAACAA TGAATTGATT	1980
CAGGCTCAGA CATGGGATGA CGCCATTGTC AACAAAGGCTT TGAATCATTT CAAGGGTCGA	2040
GCGTGTGAG ACCAGTTTGT TGTAAACGGG ATGAAGGGTG ATTTTGTCAA GGAAGGTACG	2100
ATTTTACAG ATCTTGAAAG TTTTATGACT CCAGAAATGA TTGAAAAATT CTACCAACGG	2160
ATGCAATTG TGATGAATT AACATCTGAC CTCCTTGGTG GTGTGCTCAA GATGAGCATG	2220
GTTGTGGTG AGGAACGTTT GAGTTCGGTT TTGGAAGAAA TCAATGCTCT CTTTGATGGC	2280
CGTGTCCGAG CTGTATCCAG TGGCTATGGT TGCATTGATA TCCTCCAAGC TGGGATTCAT	2340
AAAGCATGGG GCTTGGAGGA ATTACTCAAG CGCTGGGACT TGAAATCCCA AGAAATCATG	2400
GCTTTTGGTG ATAGTGAAAA TGATGTTGAA ATGCTTGAAA TGGCTGGAAT TGCCTATGCG	2460
ATGGAAAATG CTGATGAGAA AGCCAAAGCT CTGGCGACTG CTCTAGCACC AGCCAACAGC	2520
CAAGGAGGAG TTTATCAAGT CTGGGAAAAC TGGTTAGAAA AAGGAGAATG AAGTGGCAGT	2580
ACAGTTATTA GAAAATTGGC TCCTAAAGGA ACAAGAAAAA ATTCAAACATA AGTATCGTCA	2640
CCTAAATCAC ATTTCTGTTG TAGAACCAAA CATTCCTTTT ATTGGGGATT CCATTGTCGA	2700
GTATTATCCT CTACAGGAGC TATTTGGGAC TTCAAAGACG ATTGTCGAATC GAGGAATTCG	2760
TGGCTATCAG ACAGGACTGT TACTAGAGAA CCTTGATGCT CATCTATATG GTGGAGCAGT	2820
AGATAAAATT TTTCTTCTGA TTGGGACAAA TGATATCGGA AAGGATGTTC CTGTGAATGA	2880
GGCTCTCAAT AATCTCGAAG CTATCATTCA ATCCGTGCT CGCGATTATC CATTGACAGA	2940
GATTAAATTG CTTTCCATTT TGCTGTCAA TGAGAGAGAG GAGTACCAGC AGGCAGTCTA	3000
TATCCGCTCG AATGAAAAA TTCAGAACTG GAATCAAGCC TATCAAGAGC TTGCATCTGC	3060
CTATATGCAG GTGGAATTTG TGCCAGTATT TGATTGTTTG ACAGACCAAG CAGGCCAACT	3120
CAAAAAAGAA TATACAACTG ATGGACTGCA CCTCAGTATT GCTGGTTATC AGGCTTTGTC	3180
AAAATCCTTG AAAGACTATC TTTACTAAAT AGCTAAATAA TGTAAATTT GAGCATAATA	3240

1034

TCTTGTA AAA AATCTA AAA TCCTTTA AAA TAAAAAGTGA CGGAGGAATT TATGAATGTA	3300
AATCAGATTG TACGGATTAT TCCTACTTTA AAAGCTAATA ATAGAAAATTT AAATGAAACA	3360
TTTTATATTG AAACCCCTTG AATGAAGGCC TTGTTAGAAG AATCGGCCTT TCTGTCACTA	3420
GGTGACCAAA CGGGTCTTGA AAAGCTGGTT TTAGAAGAAG CTCCCAGTAT GCGTACTCGT	3480
AAGGTAGAGG GAAGAAAAA ACTAGCTAGA TTGATTGTCA AGGTGGAAAA TCCCTTAGAA	3540
ATTGAACGAA TCTTATCTAA AACAGATTCG ATTCATCGAT TATATAAAGG TCAAAATGGC	3600
TACGCTTTTG AAATTTTCTC ACCAGAAGAT GATTTGATTT TGATTCATGC GGAAGATGAC	3660
ATAGCAAGTC TAGTAGAAGT AGGAGAAAAG CCTGAATTTT AACAGATTT GGCATCAATT	3720
TCTTTAAGTA AATTTGAGAT TTCTATGGAA TTACATCTCC CAACTGATAT CGAAAGTTTC	3780
TTGGAATCAT CTGAAATTGG GGCATCCCTT GATTTTATTC CAGCTCAGGG GCAGGATTTG	3840
ACTGTGGACA ATACGGTTAC CTGGGACTTA TCTATGCTCA AGTTCTTGGT CAATGAATTA	3900
GACATAGCAA GTCTTCGCCA GAAGTTTGAG TCTACTGAAT ATTTTATTTCC TAAGTCTGAA	3960
AAATCTTCC TTGGTAAAGA TAGAAATAAT GTTGAATTCT GGTTTGAAGA AGTATGAAGT	4020
GGACCAAGAT TATTA AAAA ATAGAAGAAC AAATCGAGGC AGGGATTTAT CCCGGAGCCT	4080
CTTTTGCCTA TTTTAAGGAC AATCAATGGA CAGAGTTCTA TTTAGGCCAG AGTGACCCAG	4140
AGCATGGCTT GCAGACTGAG GCAGGACTAG TTTATGACCT AGCTAGTGTC AGCAAGGTTG	4200
TTGGGGTTGG CACAGTTTGT ACCTTCTTGT GGGAAATAGG TCAATTAGAT ATTGATAGAC	4260
TGGTAATAGA TTTTTTACCT GAGAGTGATT ATCCAGACAT CACTATTCGC CAGCTCTTGA	4320
CTCATGCAAC AGACCTTGAT CCTTTTATTC CTAATCGTGA TCTTTTAAACA GCCCCTGAAT	4380
TAAAGGAAGC GATGTTTCAT CTCAACAGAC GAAGTCAGCC AGCCTTTCTT TATTCGGATG	4440
TCCATTTTTT GCTGTGGGC TTTATTTTGG AAAGAATTTT TAATCAAGAT TTGGATGTGA	4500
TTTTAAAGGA TCAAGTCTGG AAACCTTGGG GAATGACGGA AACTAAGTTT GGGCCAGTTG	4560
AGCTTGCTGT TCCAACAGTT AGAGGTGTAG AGGCAGGCAT AGTGCATGAT CCCAAGGCTC	4620
GTCTCCTGGG TAGACATGCT GGGAGTGCTG GTTTATTTTC GACTATAAAG GATTTACAAA	4680
TCTTTT TAGA AACTATTTA GCAGATGATT TTGCAAGAGA CTAAATCAA AATTTTCTC	4740
CTTTGGATGA CAAGGAACGT TCTTTAGCAT GGAATTTGGA AGGAGATTGG CTAGACCATA	4800
CGGGCTATAC AGGTACCTTT ATCATGTGGA ATCGTCAGAA GCAAGAAGCC ACTATTTTCC	4860
TATCGAATCG TACCTATGAA AAGGACGAGA GAGCTCAATG GATATTAGAC CGCAATCAAG	4920
TGATGAACTT GATTCGCAAA GAAGAGTAAG GAGAGACATG TCAAATAGTT TAAAAGGGAC	4980
TTTACTAACA GTTGTGGCTG GTATTGCTTG GGGTTGTCA GGAACGAGTG GCCAATACCT	5040

1035

AATGGCACAC GGAATTTTCGG CTCTGGTCTT GACTAACTTG CGTCTTTTAA TCGCTGGTGG	5100
AATTCTCATG CTCTTGGCTT ATGCTACTGC AAAGGATAAA ATACTGGTCT TTTTAAAGGA	5160
TAGAAAGAGT TTGCTGTCTC TTCTTATTTT TGCTCTGATT GGTCTTTTTC TCAACCAATT	5220
CGCCTATCTG TCTGCTATTC AGGAGACCAA TGC GGGAACA GCGACGGTGC TTCAGTATGT	5280
TTGTCTGTG GGAATTTTAA TTTATAGCTG TATCAAGGAT AGGGTGGCAC CGACACTGGG	5340
AGAGATAGTT TCCATCATAT TCGCCATCGG AGGAACCTTC CTGATCGCAA CACATGGGCA	5400
GTTGGACCAG TTATCCATGA CACCTGCTGG TCTGTTCTGG GGTCTCTTTT CTGCCTTGAC	5460
TTATGCTCTG TATATCATTT TACCCATAGC CTTGATTAAA AAGTGGGGGA GCAGCTTGGT	5520
CATTGGTGTG GGAATGGTCA TAGCAGGTTT GGTGCGCCCTT CCTTTTACAG GGGTTCTACA	5580
GGCCGATATC CCGACTAGTC TTGATTTTCT CCTTGCCTTT GCAGGCATTA TCCTTATCGG	5640
GACTGTCTTT GCCTATACAG CTTTCCTTAA AGGAGCCAGT CTGATAGGAC CGGTCAAGTC	5700
AAGCTTGTTG GCTTCAATTG AGCCAATATC GCGGATTTTC TTGCGCTTCT TAATAATGAA	5760
TGAACAATTT TATCCCATTG ATTTTCTTGG TATGGCAATG ATATTGTTTG CTGTAACTTT	5820
GATTTCTTTG AAAGATTTAT TCTTAGAAAA ATAAAAAGA CTCTTTGTCC GTGACAGAGA	5880
GTTTTTGCGT GGTAACTAA TTATTTTCAA GATAAAATTC AAAGCGTTCG CCTACATATT	5940
GACTTTTTTAC GTATTCAAAA GCAGTACCAT CTTCTAGGTA GGAAACCTGG GTCAATCCAA	6000
GAATAGCATG TCCTTTTTC ACTTCCAAAT AGTGGGCAAT CTTTCTTTA GCAAGGCGAG	6060
CATAGATGGT CTGTTGAGAT TTGCCGATAC GATAGCCATG TTTTTCGAAG GTTGGAAGA	6120
AATGACTGGT GATTTCTTCT TTTTAAAGT CCTTAATGAA TTTTTCAGGA ATAGAAGCAA	6180
CTTCATAAAC TAGGGGAAC TGGTCGGCAT AGCGGACCCG CTCCATTCGG ATAATATGT	6240
CCGTTGGAAA AATTCCTAGC TTGGCAACTT CTTGCTCATT GGGAAATGGT TTTTGTAGG	6300
AAATGAGCTG GCTAGAGGGA ACTTTACCTT GGGATTTGAC AATTTCAGTA AAACGGTTG	6360
TCCCTCGCAT CTTTCTTGT ACTCGAGTAC TGGAAACAAA GGTGCCGCTT CCTACACGC	6420
GCTCTAAGAC GCCTTCTTCG ACTAATAGAG ATACGGCTTG GCGGAGGGTC ATGCGACTGA	6480
CCGCAAAC TGCTAGCTAAA TCTCTTTCAC TGGGAAGCCT CTCACCAATA GCCCAACGGT	6540
ACTCGTCAAT ATCCTTTTTT ATCTGATCAT GGATTTTAT ATAAGCAGGT AGCATATTTT	6600
TCACATCAT TCTATCTTTT CTCTATTGTA CCCCAATAAA CTAGAAAAAG TCAAACCTCG	6660
CCTTGTTTAG TTGGTAATTC GCCCTTATTT GTGATAGAAT ATTGAGAAAA GATATTCTT	6720
TTGAGAAAGG AAAAAGATGA GCAACATTTT AACTGATTTG CAAGATGTAG AAAAAATCAT	6780

1036

CGTATTGGAC TATGGTAGCC AGTACAACCA GCTGATTTC	CGCCGTATCC GTGAGATTGG	6840
TGTTTTTTCA GAACTAAAAA GCCATAAAAT TTCAGCTGCT	GAAGTTCGTG AAGTCAATCC	6900
TGTAGGAATT ATTCTATCAG GTGGTCCAAA TTCTGTATAT	GAAGATGGT CATTTGATAT	6960
TGACCCAGAA ATCTTCGAAC TCGGAATTCC AATTTTGGGA	ATCTGTTATG GTATGCAGTT	7020
ATTGACCCAT AAACCTGGAG GAAAAGTTGT TCCTGCAGGT	GATGCTGGAA ATCGTGAATA	7080
CGGTCAATCA ACCCTAACTC ACACACCATC AGCGCTTTT	GAATCAACAC CTGATGAACA	7140
GACTGTTTTG ATGAGCCATG GTGATGCGGT TACTGAGATT	CCTGCTGACT TTGTTTCGTAC	7200
AGGTACATCA GCTGACTGCC CATACGCAGC CATCGAAAAC	CCAGATAAAC ACATTTACGG	7260
TATCCAATTC CACCCAGAAG TTCGTCATTC TGTATACGGA	AATGATATCC TTCGTAACTT	7320
TGCCCTTAAC ATTTGTAAGG CTAAAGGTGA CTGGTCAATG	GATAATTTCA TTGACATGCA	7380
GATCAAAAAA ATTCGTGAAA CCGTCGGTGA TAAACGTGC	CTTCTTGGTC TATCAGGTGG	7440
TGTTGACTCA TCTGTCTTG GGGTTCTTCT CCAAAAAGCG	ATTGGCGATC AATTGATCTG	7500
TATCTTCGTA GACCACGGTC TTCTTCGTAA AGCGGAAGCT	GATCAAGTTA TGGACATGCT	7560
CGGTGGTAAG TTTGGTTTGA ATATCGTCAA AGCAGACGCT	GCTAAACGTT TCCTTGACAA	7620
ACTTGCTGGC GTTTCGTACC CTGAACAAAA ACGTAAATC	ATCGGTAACG AGTTTGTCTA	7680
TGTATTCGAT GACGAAGCAA GCAAGCTCAA AGATGTGAAA	TTCCTTGCTC AAGGTACTTT	7740
ATATACAGAT GTTATCGAGT CTGGTACGGA TACAGTCAA	ACTATCAAGT CACACCACAA	7800
CGTGGtGGTC TTCCAGAAGA TATGCAGTTT GAATTGATTG	AACCACTCAA TACTCTTTAC	7860
AAGGATGAAG TTCGTGCTCT TGGTACAGAG CTTGGTATGC	CAGACCATAT CGTATGGCGC	7920
CAACCATTC CAGGACCAGG ACTTGCTATC CGTGTCTATG	GTGAAATCAC TGAAGAGAAA	7980
CTTGAAACCG TTCGTGAATC AGACGCTATT CTTCTGTAAG	AAATCGCTAA AGCTGGACTT	8040
GACCGCGATA TTTGGCAATA CTTCACTGTT AACACAGGCG	TTCTGTTTCACT CGGTGTTATG	8100
GGTGACGGTC GTACGTATGA CTACACGATT GCAATCCCTG	CTATCACTTC TATCGATGGT	8160
ATGACTGCTG ATTTTGCCAA AATTCCATGG GAAGTACTTC	AAAAAATCTC AGTACGTATC	8220
GTAAATGAAG TGGATCATGT TAACCGTATC GTCTACGATA	TTACAAGTAA ACCACCTGCA	8280
ACAGTTGAGT GGGAATAATC GCAAAAAAAT TAAAAGCTTT	GTAAAATCAA CGGTTACAGA	8340
GGATTAAAA CTGTAACCTGG GATTAAACG GGAACATTG	CTAAAAAGAA TAAATTGAAT	8400
AATAGTTCCA AGTGGTTTAC ATTTGGACAA AAAATTAGAC	CGTAGTTTTC AAGCTGCGGT	8460
CTTTTGATAT ATATAATGAG AATTAATGGC TCTTTGTCAA	CTGTAGTGGG TTGAAGTCAG	8520
CTAAGCTCGA GAAAGGACAA ATTTTGTCTT TTCTTTTTTG	ATATTCAGAG CGATAAAAAAT	8580

1037

CCGTTTTTTG AAGTTTTCAA AGTTCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT	8640
GAGATTATTG GTCGCTTCCA ATTTGGCGTT AGAATAGTGT AGTTGAAGGG CGTTGACGAT	8700
TTTCTCTTTG TCCTTTAGAA AGGTTTTAAA GACAGTCTGA AAAAGAGGAT GAACCTGCTT	8760
TAGATTGTCC TCAATGAGTC CGAAAAATTT CTCCGGTTCC TTATTCTGAA AGTGAAACAG	8820
CAAGAGTTGA TAGAGCTGAT AGTGATGTTT CAAGTCTTGT GAATAGCTCA AAAGCTTGTT	8880
TAAATCTCT TTATTGGTTA AATGCATACG AAAAGTAGGG CGATAAAAAT GTTTATCGCT	8940
GAGTTTACGA CTATCTGTT GTATGAGCTT CCAGTAGCGC TTGATAGCCT TGTATTCATG	9000
AGACTTTCGA TCCAATTGAT TCATGATTG AACACGCACA CGACTCGG	9048

(2) INFORMATION FOR SEQ ID NO: 160:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10399 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

GTACCTTTAT TGATGAATGG ACTGTTTAAA TCAGTAGCAC GCCAACCAGA TATGCTTCT	60
GAGTTTCGTA GTTTGATGTT TTTAGGTGTT GCCTTTATTG AAGGAACTTT CTTTGTAAC	120
CTTGCTTTCT CATTTATTAT CAAATAAATA CATGGAACGA GAAGAAAAGG GAGGATTTTA	180
GATGGAAGAA AGTATTAATC CAATCATCTC TATTGGTCCT GTTATCTTCA ATCTGACTAT	240
GTTAGCCATG ACTTTGTTGA TTGTGGGAGT TATTTTGTG TTTATTTATT GGGCAAGCCG	300
CAATATGACC TTGAAACCCA AAGGAAAGCA AAATGTACTT GAGTATGTCT ATGACTTTGT	360
TATTGGATTT ACAGAACCTA ACATTGGTTC GCGCTACATG AAAGATTACT CACTCTTTTT	420
CCTTTGTTTA TTCCTTTTC TGGTGATTGC CAATAACCTT GGCTTAATGA CAAAGCTTCA	480
AACGATCGAT GGGACTAACT GGTGGAGTTC GCCAACCGCT AATTTACAGT ATGACTTAAC	540
CTTATCTTTT CTGTGCATTT TGTGACACA TATAGAAAGC GTTCGTCGTC GTGGATTAA	600
AAAAAGTATA AAATCTTTTA TGAGTCCTGT TTTTGTGATA CCCATCAATA TCTTGGAAGA	660
ATTTACAAAC TTCTTATCTT TGGCTTTGCG GATTTTGGG AATATCTTTG CAGGAGAGGT	720
CATGACGAGT TTGTTACTTC TTCTTTCCCA CCAAGCTATT TATTGGTATC CAGTAGCCTT	780
TGGAGCTAAT TTGGCTTGGA CTGCATTTTC TGTCTTTATT TCCTGCATCC AAGCTTATGT	840
TTTACTCTT TTGACATCTG TGTATTTAGG GAATAAGATT AATATTGAAG AGGAATAGAA	900

1038

AGGAGTAACT GATGCACGTA ACAGTAGGTG AATTAATTGG TAATTTTATT TTAATCACTG	960
GCTCTTTTAT TCTTTTGCTA GTCTTGATTA AAAAATTTGC ATGGTCTAAT ATTACAGGCA	1020
TTTTCGAAGA AAGAGCTGAA AAAATTGCTT CAGATATTGA CAGAGCTGAA GAAGCCCGTC	1080
AAAAAGCAGA AGTATTGGCT CAAAAACGCG AAGATGAATT GGCTGGTAGC CGTAAAGAAG	1140
CTAAGACAAT CATTGAAAAT GCAAAGGAAA CAGCTGAGCA AAGTAAGGCT AATATCTTAG	1200
CAGATGCTAA ACTAGAAGCA GGACACTTAA AAGAAAAAGC CAATCAAGAA ATTGCTCAAA	1260
ATAAAGTAGA AGCTTTACAG AGTGTTAAGG GTGAGGTGCG AGATTTGACC ATCAGCTTAG	1320
CTGGTAAAAT CATCTCACA AACCTTGACA GTCATGCCCA TAAAGCACTC ATTGATCAGT	1380
ATATCGATCA GCTAGGAGAA GCTTAATGGA CAAGAAAACA GTAAAGGTAA TTGAAAAATA	1440
CAGCATGCCT TTTGTCCAAT TGGTACTTGA AAAAGGAGAA GAAGACCGTA TCTTTTCAGA	1500
CTTGACTCAA ATCAAGCAAG TTGTTGAAAA AACAGGTCTG CCTTCTTTT TAAAACAAGT	1560
GGCAGTAGAC GAGTCGGATA AGGAAAAAAC AATTGCTTTT TTCCAAGATT CTGTGTCGCC	1620
TTTATTACAA AACTTTATCC AGGTCTGCGC CTACAATCAC AGAGCAAATC TTTTTTATGA	1680
TGTGCTTGTA GATTGCTTGA ACCGACTTGA AAAAGAAACA AATCGATTTG AAGTGACGAT	1740
TACGCTGCT CATCCTCTAA CTGATGAACA GAAGACTCGT TTGCTCCCTT TGATTGAGAA	1800
AAAAATGTCT CTGAAAGTAA GGAGTGTAAG AGAACAATC GATGAAAGTC TCATTGGTGG	1860
TTTTGTGATT TTGCCCAATC ACAAGACAAAT TGATGTGACT ATTAAACAAC AACTTAAAGT	1920
TGTTAAAGAA AATTTGAAAT AGAAAGTGGT GTTCTTTTGG CAATTAACGC ACAAGAAATC	1980
AGCGCTTTAA TTAAGCAACA AATTGAAAAT TTCAAACCCA ATTTTGATGT GACTGAAACA	2040
GGTGTGTGTA CCTATATCGG GGACGGTATC GCGCGTGCTC ACGGCCTTGA AAATGTCATG	2100
AGTGGAGAGT TGTGAATTT TGAAAACGGC TCTTATGGTA TGGCTCAAAA CTTGGAGTCA	2160
ACAGACGTTG GTATTATCAT CCTAGGTGAC TTTACAGATA TCCGTGAAGG CGATACAATC	2220
CGCCGTACAG GGAAAATCAT GGAAGTCCCT GTAGGTGAAA GTCTGATTGG TCGTGTGCG	2280
GATCCGCTTG GTCGTCCAGT TGACGGTCTT GGAGAAATCC ACAC TGATAA AACTCGTCCA	2340
GTAGAAGCAC CAGCTCCTGG TGTATGCAA CGTAAGTCTG TTTCAGAACC ATTGCAAATC	2400
GGTTTGAAAG CTATTGACGC CCTTGTACCG ATTGGTCGTG GTCAACGTGA GTTGATTATC	2460
GGTGACCGTC AGACAGGGAA AACAACCATT GCGATTGATA CAATCTTGAA CCAAAAAGAT	2520
CAAGATATGA TCTGTATCTA CGTCGCGATT GGACAAAAAG AATCAACAGT TCGTACGCAA	2580
GTAGAAACAC TTCGTCAGTA CGGTGCCTTG GACTACACAA TCGTTGTGAC AGCCTCTGCT	2640
TCACAACCAT CTCATTGCT CTTCCTAGCT CCTTATGCTG GGGTTGCTAT GGCGGAAGAA	2700

1039

TTTATGTATC AAGGTAAGCA TGTTTTGATT GTATACGATG ATCTATCAAA ACAAGCGGTA	2760
GCTTATCGTG AACTGTGCGT CTTGCTTCGT CGTCCTCCAG GTCGTGAAGC CTTCCAGGC	2820
GATGTTTICT ATCTCCACAG CCGTTTGCTT GAGCGCTCAG CTAAAGTTTC TGATGAACTT	2880
GGTGGTGAT CAATTACAGC CCTACCA'TT' ATCGAGACAC AAGCAGGACA TATCTCAGCC	2940
TATATCGCAA CCAACGTGAT TTCTATCACT GATGGACAAA TCTTCCTTGG CGATGGCCTC	3000
TTCAATGCAG GTATTGCTC AGCCATCGAT GCGGGTTCAT CTGTATCTCG TGTAGGTGGT'	3060
TCTGCACAAA TCAAAGCCAT GAAGAAGGTT GCTGGTACAC TTCGTATCGA CCTTGCTTCA	3120
TACCGTGAGT TGGAAAGCCTT TACTAAGTTT GGTCTGACT TGGACGCAGC AACACAGGCT	3180
AAGTTGAACC GTGGACGTCG TACCGTTGAG GTCTTGAAAC AACCTGTTCA CAAACCATTA	3240
CCTGTTGAGA AACAAGTAAC CATTCCTTAT GCTTTGACAC ATGGTTTCTT GGATACTGTT	3300
CCAGTAGATG ATATTGTTG TTTGAGGAA GAGTCCATG CCTTCTTTGA TGCTCAACAT	3360
CCAGAGATTT TGGAAACCAT TCGTGATACA AAAGACTTGC CAGAAGAAGC ACTCTTGGAT	3420
GCTGCGATTA CAGAGTTTCT CAATCAATCT AGCTTCCAAT AAGAATAGAG GTGTCAGATG	3480
GCAGTATCTC TAAATGATAT TAAAACAAAA ATCGCCTCAA CAAAAAATAC GAGTCAAATC	3540
ACTAATGCCA TGCAATGGT ATCGGCTGCT AAGCTAGGTC GTTCTGAAGA AGCTGCTCGC	3600
AACTTCCAAG TTTACGCTCA GAAAGTGCCT AAAC'TTTGA CAGATATCCT TCATGGTAA'	3660
GGAGCTGGTG CTTCAACTAA TCCGATGTTG ATTAGCCGTT CTGTGAAGAA GACAGGCTAT	3720
ATCGTTATCA CTTCAGACCG CGGTTTGCTT GGAGGTATA ATTCCTCTAT TTTGAAAGCT	3780
GTTATGGAGT TGAAAGAAGA ATACCACCCA GACGGTAAAG G'TTTTGAAAT GATCTGTATC	3840
GGTGGGATGG GAGCTGATTT CTTTAAGGCT CGCGGTATTC AACCACTTA TGAATTACGT	3900
GGCTTGTCAG ACCAACCTAG CTTTGATCAA GTTCGTAAGA TTATTTCAAA AACTGTTGAA	3960
ATGTACCAAA ATGAACTCTT TGATGAGCTT TATGTTTGCT ACAACCACCA TGTCATACG	4020
CTAACCATG AAATGCGTGT GGAACAAATG CTTCCGATTG TTGACTTGGA TCCAAATGAA	4080
GCGGATGAAG AGTACAGCTT GACTTTTGAA TTGGAAACCA GCCGAGAAGA AAT'TCTGGAG	4140
CAGTTGTTGC CTCAGTTTGC AGAAAGTATG ATTTACGGTG CCATTATCGA TGCCAAGACA	4200
GCTGAGAATG CTGCGGGCAT GACAGCCATG CAAACAGCGA CAGATAATGC TAAGAAAGTC	4260
ATCAATGATT TGACAATTCA GTATAACCGT GCCAGACAGG CGGCGATTAC ACAAGAAATT	4320
ACAGAAATCG TAGCAGGTGC TAGTGCCTTA GAATAGGCTC TAGTCCAGCT CGTATGAAAA	4380
TGAACCTAGG ACCTAGTTGA GCTAGGAACC GACAGTATCT' TATATAGAAT AGGAGAAGGA	4440

1040

GATGAGTTCA GGTAAAATTG CTCAGGTTAT CCGTCCCGTT GTAGACGTTT TGTTCGAGC	4500
AGGGGAAAAA CTTCTGAGA TTAACAATGC ACTTGTCTGC TACAAAAATG ACGAAAGAAA	4560
AACAAAAATC GTCCTTGAAG TAGCCTTGA GTTAGGAGAT GGTATGGTTC GTACTATCGC	4620
CATGGAATCA ACAGATGGGT TGACTCGTGG AATGGAAGTA TTGGACACAG GTCGTCCAAT	4680
CTCTGTACCA GTAGGTAAAG AAACCTTGGG ACGTGTCTTC AACGTTTGG GAGATACCAT	4740
TGACTTGAA GCTCCTTTTA CAGAAGACGC AGAGCGTCAG CCAATTCATA AAAAAGCTCC	4800
AACTTTTGAT GAGTTGTCTA CCTCTTCTGA AATCCTTGAA ACAGGGATCA AGGTTATTGA	4860
CCTCTTGCC CCTTACCTTA AAGGTGGTAA AGTTGGACTT TTCGGTGGTG CCGGAGTTGG	4920
TAAAACTGTC TTAATCCAAG AATTGATTCA CAACATTGCC CAAGAGCACG GTGGTATTTT	4980
AGTATTTGCT GGTGTGGGG AACGTACTCG TGAGGGGAAT GACCTTTACT GGGAAATGAA	5040
AGAATCAGGC GTTATCGAGA AAACAGCCAT GGTCTTTGGT CAGATGAATG AGCCACCAGG	5100
AGCAGTATG CGTGTGCCC TTAAGTGGTT GACAATCGCT GAATACTTCC GTGATGTGGA	5160
AGGCCAAGAC GTGCTTCTCT TTATCGATAA TATCTTCCGT TTCACTCAGG CTGGTTCAGA	5220
AGTATCTGCC CTTTGGGTC GTATGCCATC AGCCGTGGT TACCAACCAA CACTTGCTAC	5280
GGAAATGGGT CAATTGCAAG AACGTATCAC ATCAACCAAG AAGGGTCTG TAACCTCTAT	5340
CCAGGCTATC TATGTGCCAG CGGATGACTA TACTGACCCA GCGCCAGCAA CAGCCTTCGC	5400
TCACTTGGAT TCAACAACAA ACTTGAACG TAAGTTGGTA CAATTGGGTA TCTACCCAGC	5460
CGTTGACCCA CTTGCTTCAA GCTCACGTGC CTTGGCACCT GAAATCGTTG GAGAAGAGCA	5520
CTATGCAGTT GCTGCTGAAG TAAAACGTGT CCTTCAACGT TACCATGAAT TGCAAGATAT	5580
CATTGCTATC CTTGGTATGG ATGAGCTTTC TGATGAAGAA AAGACCTTGG TTGCTCGCGC	5640
CCGTCGTATC CAGTTCTTCT TGTCAAAAA CTTCACGTT GCGGAACAAT TTAAGTGTCA	5700
GCCAGGTCTT TATGTTCCAG TTGCTGAAAC TGTACGTGGC TTTAAGGAAA TCCTTGATGG	5760
TAAATACGAC CACTTGCCAG AAGATGCCCT CCGTGGTGTA GGTCTATCG AAGATGTGAT	5820
TGCAAAAGCT GAAAAAATGG GATTTTAAGA GGTGATCTAT GGCTCAGTTA ACTGTCCAGA	5880
TCGTGACACC AGATGGTCTC GTCTATGATC ACCATGCCAG CTATGTATCG GTTCGAACTC	5940
TGGATGGTGA GATGGGGATC TTGCCACGAC ATGAAAATAT GATTGCGGTT TTAGCAGTTG	6000
ATGAAGTAAA GGTAAAACGT ATCGATGATA AAGATCACGT GAACTGGATT GCAGTAAACG	6060
GTGGCGTTAT TGAAATGACC AATGATATGA TCACAATCGT CGCTGACTCT GCAGAACGTG	6120
CTCGTGATAT CGATATCAGT CGTGCAGAAC GTGCCAACT TCGTGCAGAA CGTGCAATTG	6180
AAGAAGCACA AGACAAACAT TTGATTGACC AAGAACGTCG TGCTAAGATT GCTTTGCAAC	6240

1041

GTGCTATTAA	CCGTATTAAT	GTCGGAAATA	GACTATAAGA	AAAAATGAAC	TTGAAAATAC	6300
CAAGTTCATT	TTTTATGCTG	TTTAAAGGAG	CAAAACGGAT	GCAGACTGCT	TCGGGAACAT	6360
GGAAGTCGTT	GGAGAGTTCT	GCTAGACGAC	CATTGTCACA	ATTACGTTTA	AAGACAGTTG	6420
CATTGTCAGA	GTCTTGATGG	ACAACAATGA	GAAATTTTGT	GTCGGGTGTC	AAATCAAAAT	6480
CACGTGGAGT	CTGACCATGC	GTTGGAACGA	TTTCTAATAA	CTCTAAGCTA	CCGTCCGCAA	6540
GGATGGTATA	TACTGCGATA	GAATCATGGC	CACGGTTAGA	AGCGTAGAGG	TATTTACCGT	6600
CTTTAGAGAG	ATGAATAGCA	GCGGTTCAT	TAAAGCCTTC	GTAAGCTTCC	GGTAAAGTTG	6660
AAATGACCTG	CATACGTTCA	AATTCGCCAA	CGCCATCGTA	GATTAAAACT	TCGATAGTAC	6720
TATTGAGTTC	ACAAATGAGA	TAAGCGATTT	TATAGTGGTT	ATGGAAAATG	ATATGGCGTG	6780
AGCCTGCTCC	TGGCTTGCTG	TGATAGGTAT	AGAGCTTAGA	TAATTTTCCT	TCTTGATCGA	6840
GGTCATAGGT	GATGACTTGG	TCAGTTCCCA	AGTCGCAGGT	CACTAGATAG	TGGTCAGGTG	6900
TTAAATCTGT	ATAGTGAACA	TGGGGGAAG	CTTGATTTTC	ATGTGGACCT	TGGCCACTGT	6960
GTTGATCCAT	ATCACTAAGT	AGAAGACTAC	CATCTTCCTG	GCGTTTATAA	ACAAGGACTT	7020
GTCCCTTGTTG	ATAGTTAGCT	GCGTAAACCA	AATCACGCTT	TTCATCGACA	GCAACATAAC	7080
AGTGGGGAGC	TCCTTCTTCA	ACAACATGAT	TTAACACAGT	CCCGTCAGTT	TGATAGGCTG	7140
CAATTCCCCC	CTTATCGTCT	TGGCTACCAA	CAGTGTATAA	ATGTTGGTGC	TGGTCAAAGG	7200
CAAGGTAGGT	TGGACTTGGC	TCAGCTGCAA	AAAGTTCTAG	ATTTGAAAGC	TGACCAGTTT	7260
CTGTATCAAA	GTCTGCCTTG	TAAATCCCTT	GAGAAGTACG	ACGTGTATAA	GTTCCAAAAT	7320
AAACAGTTTC	TTTCATTACT	ATACCTCTGT	GTAAGATAA	GACTATTATA	TCACAAAAAC	7380
AAGTAAATTA	AAGATATCCA	ATTAGATGTA	AGCACTTTAA	AAAAGAGTTA	TTTTGTTC	7440
AAAATGGTAT	AATGAGAGAA	CAATAGAAAG	GAAGTATTTA	TGGAGCAAAA	AGAGAAACAT	7500
TTTAGCCTAT	CTTGGTTTTT	CAAGTGTTTT	TTAGATAACA	AGGCAATTAC	GGTATTTTTA	7560
GTAACCTTAT	TATTGGGACT	GAATCTTTTT	ATTTTAAGTA	AGATTAGTTT	TCTATTTTCA	7620
CCTGTTTAG	ACTTTTTAGC	AGTTGTGATG	TTGCCAGTCA	TTTTGTCTGG	TTGTATATAT	7680
TATTGCTTGA	ATCCTATTGT	TGATTGGATG	GAGAAGCATA	AGGTTAATCG	TGTATAGCT	7740
ATCACTATTG	TCTTTGTTAT	CATCGCTCTC	TTTATCATTT	GGGGCTTGGC	AGTCGCCATT	7800
CCAAATCTGC	AACGTCAGGT	TTTGACCTTT	GCAAGAAACG	TTCCTGTTTA	CTTAGAAGAT	7860
ATAGATAGGA	TTGTTAATGG	ATTGGTAGCC	CAGCACCTGC	CAGATGATTT	CAGACCTCAA	7920
TTAGAGCAAG	TTTGACCAA	TTTTTCTAGC	CAGGCTACAG	TTTGGCAAG	TAAGGTTTCA	7980

1042

TCTCAGGCAG TCAACTGGGT GAGTGCCTTT ATTAGCGGGG CTCTCAAGT GATTGTTGCC	8040
TTGATTATCG TTCCTTTCAT GCTCTTTTAT CTC'TGCGTG ATGGGAAAGG CTTGCGTAAC	8100
TATTTGACCC AATTCATTCC AAGAAAATTG AAGGAACCTG TTGGACAAGT TTTATCAGAT	8160
GTGAATCAAC AGTTGTCCAA CTATGTTCTGA GGGCAAGTGA CAGTGGCTAT TATTGTAGCA	8220
GTAATGTTTA TCATCTTCTT CAAGATTATT GGTCTACGCT ATGCGGTAC GCTGGGGGTT	8280
ACTGCTGGTA TTTTAAATCT GGTCCCTTAT CTTGGTAGCT TTCTAGCCAT GCTTCCTGCT	8340
CTAGTATTGG GTTTGATTGC TGGTCCAGTC ATGCTTTTGA AAGTAGTGAT TGTCTTTATC	8400
CTAGAACAAA CTATTGAAGG CCGTTTGTG TCTCCATTGA TTTTGGGAAG TCAATTAAAC	8460
ATCCACCCTA TTAATGTTCT CTTTGTTTTG TTAACCTCAG GATCTATGTT TGGTATCTGG	8520
GGAGTTTAC TTGGTATTCC GGTATTATGCC TCTGCTAAGG TTGTCATTTC AGCCATTTTC	8580
GAATGGTATA AGGTAGTCAG TGGTCTATAT GAATTAGAGG GTGAGGAAGT CAAGAGTGAA	8640
CAATAGTCAA CAGATGTTAC AGGCTTTGGA GGAGCAAGAT TTAACATAAG CTGAGCATT	8700
TTTCGCCAAA GCTTTAGAAA ATGATTCAAG TGATCTTCTG TATGAATTGG CAACTTATCT	8760
TGAAGGGATT GGTTCCTATC CTCAGGCCAA GGAAATTAC CTGAAAATTG TAGAGGATTT	8820
TCCAGAGGTT CATCTTAATC TAGCTGCAAT TGCTAGCGAG GATGGTCAA TAGAAGAAGC	8880
CTTTACCTAT CTTGAGGAAA TCCAAGCTGA CAGTGACTGG TATGTCTCGT CTTTGGCTCT	8940
GAAGGCAGAC CTTTACCAGC TGAAGGTTT GACAGATGTG GCACGTGAGA AATTATTGGA	9000
GGCCTTGACC TACTCAGAGG ATTCTCTCTT GATATTGGGT TTGGCAGAGT TGGATAGTGA	9060
GTGGAAAAAT TACCAAGCGG CTATTCAAGC CTATGCCAG TTAGATAATC GCTCGATT	9120
TGAGCAAACG GGCATTTCCA CCTATCAACG AATTGGCTTT GCCTATGCTC AGTTAGGGAA	9180
ATTTGAAACG GCTACTGAGT TTTTAGAAAA AGCCCTGGAG TTAGAATACG ATGACTTAAC	9240
AGCTTTTGAG TTGGCCAGTC TTTATTTTGA TCAAGAAGAA TATCAAAAAG CCACCTCTA	9300
CTTTAAGCAG CTTGATACCA TTTCTCCTGA CTTTGAAGGC TATGAGTATG GGTACAGTCA	9360
GGCTTTACAT AAGGAACATC AAGTTCAAGA AGCCCTGCGT ATCGCTAAGC AAGGATTAGA	9420
GAAAAATCCC TTTGAAATC GCCTCTTGCT AGCTGCTTCA CAATTTTCTT ATGAATTGCA	9480
TGATGCTAGT GGTGCAGAAA ATTATCTCCT TACTGCAAAA GAAGACGCTG AGGATACAGA	9540
AGAAATCTTG CTCGTTTAG CCACTATTTA TCTGGAGCAG GAGCGTTATG AGGATATCT	9600
AGAATTGCAG AGTGAGGAGC CAGAAAATCT TTTGACCAAG TGGATGATTG CTCGTTCTTA	9660
TCAAGAAATG GACGATTGG ATACTGCTTA TGAGTATTAT CAAGAGTTGA CAGGAGATTT	9720
GAAGGACAAT CCAGAATTTC TGAACACTA TATCTATCTC TTGCGTGAAT TGGGACATTT	9780

1043

TGAAGAAGCA AAAGTCCATG CTCACACTTA CTAAAACTG GTTCCAGATG ATGTGCAAAT	9840
GCAAGAAGCTG TTTGAGAGAT TGTAAGAATG TTAAACCCAA ATCATTTCATA CCTCTCTCAA	9900
CTAGATGTAA CTTACAAAAC CCCTGACCTC ATGAGCCACT TTCTTCCTCC TCATGAGGTC	9960
AGTTTTACTT TCTGCTGTTC CAGTATCGTT TTTCCTCGCT AGATTTCCCTC AAAAGGGCAG	10020
ACTCCTCCCT TGGTGCGTCA CACGATTTTT TCATCTCGAC TGTTCCTTAA TGCATCATTA	10080
ACGACGCTTT TCTTCTAGGT GGTTCATAAG GAACAGGAAG ATTCAGGTTG ACTTTTCTAA	10140
TCCTAGAATA AAGTGCTGAA AACAATTCGG AATAGGCATA GAGACTAGAC AATTGAGGA	10200
GCTGCTTGCG TCCTGTTTCA ACACATTTTC CCACCACGTG AAGAAAAAGA TGGCGGAAGC	10260
GTTTGATTGT TAAAGTTTGG AAGTCACCTC CAGCTAGATG TTTGAGAAAA AGATAGAGAT	10320
TGTAGCGCAT ACAGCTCATC ATCATACGAA TTCGTTTTTG ATTAAGGTTG AACTATCCGT	10380
TTTATCGCCA AAAAATCGG	10399

(2) INFORMATION FOR SEQ ID NO: 161:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9409 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

GATAAGATTA AGTTAGAAAA GAAAGAACTA GGACATATCT ACCAGATTCA GGTTTTTAAT	60
AGCTATGGGC AGGAAGAAAT CTATCGTGTG ATTTTGATGG AGACCAATAT TAGTTCGGTT	120
TCAACCAATA TCAAGTATGC TGCTGTCTTG ATTAATACCA GTCAGTTGGA ACAGGCTAGT	180
CAAAAGCATG AGCAATTGAT TGTGGTCGTG ATGGCTAGTT TCTGGATTTT GTCTTTACTT	240
GCCAGTCTCT ATCTAGCTAG GGTCAGTGT AGGCCCTGCT TTTGAGAGTAT GCAGAAGCAA	300
CAGTCTTTTG TGGAAAATGC CAGTCATGAG TTACGAACTC CACTCGCAGT TTTGCAAAAT	360
CGCTTAGAGA CCCTTTTTCG TAAGCCAGAA GCTACCATTA TGGATGTGAG CGAAAGCATT	420
GCATCGAGTT TGGGAAGAAG CCGAAATATG CGTTTTTTAA CGACAAGCTT GCTGAACTTA	480
GCTCGGAGAG ATGATGGGAT TAAGCCGGAG CTTGCAGAAG TTCCAAC TAG CTTTTTAAT	540
ACAAC TTCA CAACTACGA GATGATTGCT TCGGAAAATA ATCGTGCTT CCGTTTTGAA	600
AATCGTATCC ATCGAACAAT TGTACAGAT CAGCTTCTTC TGAAACAAC GATGACCATT	660
CTTTTCGATA ATGCCGTCAA GTATACTGAG GAGGATGGTG AAATTGATTT TCTTATCTCG	720

1044

GCGACCGATC GCAATCTTTA TTTACTTGTT TCTGATAATG GAATCGGTAT TTCGACAGAA	780
GATAAAAAGA AAATTTTGA CCGTTTTTAT CGAGTAGACA AGGCTAGAAC CCGGCAAAAA	840
GGTGGTTTTG GTTTAGGATT ATCCCTAGCC AAGCAAATG TAGATGCTCT AAAAGGAACT	900
GTTACTGTCA AAGATAATAA ACCCAAGGGA ACAATCTTTG AAGTGAAGAT TGCCATTCAG	960
ACACCATCTA AAAAGAAAAA ATAAAAATAT CGCTCCAATT GGGGCGATAT TTTGGATTTA	1020
TCTTCTACGT TTTCGTTTGA TAATAGACCG TTGAACTTTT AAAACAAGTA AGCTGAATCC	1080
GATTGCTGCG GCAAAGGCAA GAGCAGTTGA TAATTTTAAT GCTAAAAAGA TAAACTAAA	1140
GATAGCAATA CAGATACAAA AACAGCGAT ATTAATAAAA AATAGGATTT CTTGAGATT	1200
GGCATCAGAT TGCCTTCAG GGTATAAGC TTGGTAATGA GGAAGCTGCT GGTTTAATTC	1260
TTCTTGATAG TCTACCTCAT AGGATTGTAA TTTTCTTACG GGCATGATTC TCTCCTAAC	1320
AGTACATACC TATTTTATCA TTTTTCGGC AGAGAATTAT TACAGAAAGG TTACAAAAAG	1380
AATAAAGTCC CTTTTCATTT TCAAAGCATG GCTGATTTTG GAGAAATGTG GTATAATTTT	1440
TCTPATGGAA AAGATTGTCA TTACAGCAAC TGCTGAAAGT ATTGAACAAG TTGAACAAC	1500
ACTCGAAGCT GCGGTAGACC GTATCTATGT CGGTGAGAAA GATTTTGGTC TTCCTCTGCC	1560
AACGACCTTT AGTTATGACC AATTACGTGA AATCGCTAAG TTGGTTCAIG ATGCTGGTAA	1620
GGAATTGATC GTTGCAGTCA ATGCTCTCAT GCACCAAGAT ATGATGGACC GTATCAAGCC	1680
TTTCTTAAAC TTCTTGGAAG AAATCAAGAC AGACTATATT ACGATTGGGG ATGCAGGCGT	1740
CTTTTACGTA GTTAACCGCG ATGGTTATTC ATTTAAGACC ATCTACGATG CTCAACCAT	1800
GGTAACTAGC AGTCGTCAGA TTAACCTCTG GGGACAAAAG GCTGGCGCAT CTGAGGCTGT	1860
TTTGGCGCGT GAAATTCAT CAGCTGAACT TTTCAAAATG CCAGAGATTT TGGAAATCC	1920
TGCTGAAGTT TTGGTTTACG GTGCTAGCGT CATCCATCAT TCTAAACGTC CACTCTTGCA	1980
AAACTACTAT AACTTTACAC ATATCGATGA TGAAAAGACG CATAAACGTG ACCTCTTCTT	2040
CGCTGAGCCA AGTGATCCAG AGAGCCACTA TTCCATTTT GAAGATAATC ATGGGACCCA	2100
TATCTTTGCC AACAAAGACC TTGATTTGAT GATCAAAATTA ACAGAATTGG TGGAGCATGG	2160
CTTTACTCGC TGGAACTAG AAGGGCTCTA CACTCCTGGT CAGAACTTTG TTGAGATTGC	2220
AAAACCTCTT ATCCAAGCGC GTAGCTTGAT TCAAGAGGGC AACTTTAGTC ATGCTCAAGC	2280
CTTCTTGCTG GATGAAGAAG TTCGTAACT TCACCCTAAA AACCGTTTCC TTGATACAGG	2340
ATTTTATGAC TACGATCCTG ACATGGTTAG ATAAAATACA TGATTCGTTG AGAGAAGGAA	2400
GATGCAACA TTTCTTCTCT CAATTTTTCG TATTTCTTCA CTATTTTACA AAAATCAGCA	2460
GGCTAGAATG CTCTATTCGA TGGGATTTTT AAGAAAAGTA GTGTTCTTGA GTTTGAAAAT	2520

1045

TATCCTATGT TTGCAGGTGC CAAATGGCCC TTTTFTTGGT ATAATTTTTT ATAA'TGAAAA	2580
CGATTGGTAA TCGCTATGTT GTGGTGGATT TAGAGGCAAC TAGCACAGGT ACTAAGGCTA	2640
AAATTATCCA AGTGGGAATT GTCGTGATTG AGGACGGAGA AATCGTCGAT CACTATACGA	2700
CGGATGTCAA TCCACATGAA CCCTTGGATG CTCATATCAA AGAACTGACA GGATTGACAG	2760
ACCAACGTCT GGCGCAAGCA CCTGATTTTT CGCAAGTTGC CAGAAAAATA TTTGACTTGG	2820
TGGAGGATGG GATTTTGTGA GCCCATAATG TTCAGTTTGA TGCTAATCTC TTGGCGGAAA	2880
ATTATTTTTT TGAAGGCTAT GAGCTAAGAA ACCCTCGTGT TGATACGGTC GAATTGGCCC	2940
AGGTCTTTTT CCCTGAACTG GAAAAATATA GCTTGCCGAT TTTGTGTCGA GAATTAGGAA	3000
TTCTCTTAA ACACGCACAC ACAGCCCTTT CAGATGCCCA AGCTACAGCA GAATTACTTC	3060
TTTTTTTACG GAAAAAGATG ACCCAGCTTC CTAAAGGTCT CTTGGAACGC TTGCTGGAAA	3120
TGGCTGACGC TCTCCTATAT GAGTCCTACC TGGTTATTGA GGAACTTAT CGCAACCAAT	3180
CTATCCTGAG TTCTCCAGAC TTGGTCCAAG TTCAAGGTCT ATATTTTAAG AAAACGGAAG	3240
CTTCTCTGGA GCCACGAAAA CTATCTCAAG ACTTTTCTAA AAATATTTCT CTGTTGAACC	3300
TTGAAGTGAG GGAGGAACAA GAAAGTTTGG CTAAAGAGGT TGGCTTGCTA TTGAAAGATG	3360
AACCTGTCTC TCTGATTCAA GCGCCGACAG GGATTGGGAA AACCTATGGC TATCTCTTAC	3420
CCGCTTTATC TCAATCCAAA GAGCGACAAA TTGTTCTTAG TGTTCGACA AAGATCTTC	3480
AAAATCAAAT CATGGAAGAA GAAGGTAAAC GCCTCAAGGA AGTGTTCAT ACAGATATTC	3540
ATAGCTTAAA GGGACCACAA AATTATCTGA AGTTGGATGC CTTTTATCAT TCCTTGCAGG	3600
AAAATGATGA AAATCGCTTA TTTAGACGCT TTAATATGCA AGTCTTGGTC TGGCTTACTG	3660
AGACAGAGAC AGGAGATTTG GATGAAATCG GGCAACTCTA CCGTTACCAA CATTTTCTAG	3720
CAGACCTTCG TCATGATGGG AATTTATCAT CCCAGAGCTT ATTTGTGACG GAAGATTTTT	3780
GGAAACGTAG TCAAGAAAGG GCAGAGACTT GCAAGCTTTT AGTGACTAAT CATGCCTATC	3840
TCGTAACCGA ACTTGAAGAT AATCCTGAAT TTGTCAGTGA CCGTTTACTG ATTATTGATG	3900
AAGTCCAAAA GATTTTGTGA GCTCTAGAAA ATCTGCTTCA AGAGACCTAC GATATACAAT	3960
CTATTATCGA TTTAATTGAT AAGGCTTTAG TAGGAGAAGA AACAGGGTT CAACAACGGA	4020
TACTAGAAAG TATTCGCTTT GAGTGTCTCT ACTTGATAGA ACAATTTCAG TCTGGCAAAT	4080
CTAGGAAAAA TATCTTAGAT TCTCTGGACA ATCTCCATCA GTATTTTCA GAATTGGAAG	4140
TAGAAGACTT TGATGAGCTG GTTCGCTATT TTACAGCTGA AGGTGATTAC TGGCTTGAAG	4200
TAACTGAAAC GAGTCAAAAG AAAATTCAGA TTCTCTCTAC AAAATCAGGC CGTACTCTTC	4260

1046

TGTCCTCTTT	ACTTCCTGAG	AGTTGCCAAG	TCTTGGGAGT	ATCGGCTACT	CTTGAGATTA	4320
GTCAGAGGGT	TTCTTTGGCA	GACCTTTTAG	GCTATCCTGA	AGCTAAATTT	GTCAAGATTG	4380
AATCTCGGGG	AAAACAGGAA	CAAGAAGTGG	TCATGGTCAA	AGATTTCCTT	CTGGTAACAG	4440
AAACCTCCTT	AGAAGTCTAT	GCCAGAGAGG	TAGCTGCTTT	ACTAGTGGAA	ATTCAAGCTT	4500
TCCAGCAACC	GATTTTGGTT	CTCTTTACCG	CTAAAGACAT	GCTTCTAGCA	GTATCGGATT	4560
TACTTACAGT	TAGCCACTTG	GCCCAGTATA	AAAATGGGGA	TGTTTCATCAG	CTAAAGAAAC	4620
GCTTTGAAAA	AGGTGAACAA	CAAATCTTGC	TTGGTGCAGC	AAGTTTCTGG	GAGGGAGTTG	4680
ATTTTTCAAG	CCATCCTTCT	GTGATTCAAG	TTGTACCGAG	GCTTCCTTTC	CAAAATCCTC	4740
AAGAACCCTT	GACGAAAAAG	ATTAAATCAAG	AACTGAATCA	AGAAGGGAAA	AATGCCTTTT	4800
ATGATTATCA	ATTGCCAATG	GCCATTATTC	GTTTAAACA	GGCTTTGGGA	AGAAGTATGA	4860
GACGTGAATA	CCAACGTTCC	TTAACTCTTA	TTTTGGATAG	GAGAATCGTC	GGAAAACGAT	4920
ACGGCAAACA	AATAGTAGCA	TCTCTAGCAG	AAGAAGCGAC	TGTTAAAACC	ATCTCTCGAT	4980
CCGAAGTTGA	CGAGGCTATT	GATAGATTTT	TTAATGAGCT	TTGATAAATA	GTATTGTATG	5040
AAAGTATAAG	GTTAGTATAT	ATGAAACGTT	CTCTCGACTC	AAGAGTCGAT	TACAGTTTGC	5100
TCTTGCCAGT	ATTTTTTCTA	CTGGTCATCG	GTGTGGTGGC	TATCTATATA	GCCGTTAGTC	5160
ATGATTATCC	CAATAATATT	CTGCCCATT	TAGGGCAGCA	GGTCGCCTGG	ATTGCCTTGG	5220
GGCTTGAT	TGGTTTGTG	STCATGCTCT	TTAATACAGA	ATTTCTTTGG	AAGGTGACCC	5280
CCTTCTATA	TATTTTAGGC	TTGGGACTTA	TGATCTTGCC	GATTGTATTT	TATAATCCAA	5340
GCTTAGTTGC	ATCAACGGGT	GCCAAAACT	GGGTATCAAT	AAATGGAATT	ACCTTATTC	5400
AACCGTCAGA	ATTTATGAAG	ATATCCTATA	TCCTCATGTT	CGCTCGTGTC	ATTGTCCAAT	5460
TTACAAAGAA	ACATAAGGAA	TGGAGACGCA	CGGTCCCGCT	GGACTTTTGG	TTAATTTTCT	5520
GGATGATTCT	CTTTTACCATT	CCAGTCCTAG	TTCTTTTAGC	ACTTCAAAGT	GACTTGGGGA	5580
CGGCTTTGGT	TTTTGTAGCC	ATTTTCTCAG	GAATCGTITT	ATTATCAGGG	GTTTCTTGGA	5640
AAATTATTAT	CCCAGTATTT	GTGACTGCTG	TAACAGGAGT	TGCTGGTTTC	TTAGCTATCT	5700
TTATTAGCAA	GGACGGACGA	GCTTTTCTTC	ACCAGATTGG	AATGCCGACC	TACCAAATTA	5760
ATCGGATTTT	GGCTTGGCTC	AATCCCTTTG	AGTTTGCCCA	AACAACGACT	TACCAGCAGG	5820
CTCAAGGGCA	GATTGCCATT	GGGAGTGGTG	GCTTATTGG	TCAGGGATT	AATGCCTCGA	5880
ATCTGCTTAT	CCCAGTTCGA	GAGTCAGATA	TGATTTTAC	GGTTATTGCA	GAAGATTTTG	5940
GCTTTATTGG	CTCTGTCCTG	GTTATTGCCC	TCTATCTCAT	GTTGATTTAC	CGTATGTTGA	6000
AGATTACTCT	TAAATCAAAT	AACCAGTTCT	ACACTTATAT	TTCCACAGGT	TTGATTATGA	6060

1047

TGTTGCTCTT	CCACATCTTT	GAGAATATCG	GTGCTGTGAC	TGGACTACTT	CCTTTGACGG	6120
GGATTCCCTT	GCCTTTCATT	TCGCAAGGGG	GATCAGCTAT	TATCAGTAAT	CTGATTGGTG	6180
TTGGTTTGCT	TTTATCGATG	AGTTACCAGA	CTAATCTAGC	TGAAGAAAAG	AGCGGAAAAG	6240
TCCCATTCAA	ACGGAAAAAG	GTTGTATTAA	AACAAATTAA	ATAAGGAGAA	AATCATGGTA	6300
AAAGTAGCAG	TTATATTAGC	TCAGGGCTTT	GAAGAAATTG	AAGCCTTGAC	AGTTGTAGAT	6360
GTCTTGCGTC	GAGCCAATAT	CACATGTGAT	ATGGTTGGTT	TTGAAGAGCA	AGTAACGGGT	6420
TCGCATGCAA	TCCAAGTAAG	AGCAGATCAT	GTCTTTGATG	GAGATTTATC	AGACTATGAT	6480
ATGATTGTTC	TTCTGGAGG	TATGCCTGGT	TCTGCACATT	TACGTGATAA	TCAGACCTTG	6540
ATTCAAGAAT	TGCAAAGCTT	CGAGCAAGAA	GGGAAGAAAC	TAGCAGCCAT	TTGTGCGGCA	6600
CCAATTGCCC	TCAATCAAGC	AGAGATATTG	AAAAATAAGC	GATACACTTG	TTATGACGGC	6660
GTTCAGAGC	AAATCCTTGA	TGGTCACTAC	GTCAAGGAAA	CAGTAGTGGT	AGATGGTCAG	6720
TTGACAACCA	GTCGGGGTCC	TTCAACAGCC	CTTGCCTTTG	CCTACGAGTT	GGTGGAGCAA	6780
CTAGGAGGGG	ACGCAGAGAG	TTIACGAACA	GGAATGCTCT	ATCGAGATGT	CTTTGGTAAA	6840
AATCAGTAAA	ACGGGAGTTA	TTCTCTCGTT	TTTATGTGG	AAAACTCAGG	GAAATCATCG	6900
CTTTTTTCAT	AAAAAATGC	TATAATGAAG	GGTATGAAAT	ATCAGGATTA	CATCTGGGAT	6960
TTAGGTGGAA	CTTTACTGGA	TAATTATGAA	ACTTCAACAG	CTGCATTTGT	TGAAACATTG	7020
GCACTGTATG	GTATCACACA	AGACCATGAC	AGTGTCTATC	AAGCTTTAAA	GGTTTCTACT	7080
CCTTTTGCGA	TTGAGACATT	CGCTCCCAAT	TTAGAGAATT	TTTTAGAAAA	GTACAAGGAA	7140
AATGAAGCCA	GAGAGCTTGA	ACACCCGATT	TTATTTGAAG	GAGTTTCTGA	CCTATTGGAA	7200
GACATTTCAA	ATCAAGGTGG	CCGTCATTTT	TTGGTCTCTC	ATCGAAATGA	TCAGGTTTTG	7260
GAAATTTTAG	AAAAAACCTC	TATAGCAGCT	TATTTTACAG	AAGTGGTGAC	TTCTAGCTCA	7320
GGCTTTAAGA	GAAAGCCAAA	TCCCGAATCC	ATGCTTTATT	TAAGAGAAAA	GTATCAGATT	7380
AGCTCTGGTC	TTGTCATTGG	TGATCGGCCG	ATTGATATCG	AAGCAGGTCA	AGCTGCAGGA	7440
CTTGATACCC	ACTTGTTTAC	CAGTATCGTG	AATTTAAGAC	AAGTATTAGA	CATATAAGAA	7500
AAAGGAATAA	GATGACAGAA	GAAATCAAAA	ATCTGCAGGC	ACAGGATTAT	GATGCCAGTC	7560
AAATTCAAGT	TTTAGAGGGC	TTAGAGGCTG	TTCGTATGCG	TCCAGGGATG	TACATTGGAT	7620
CAACCTCAAA	AGAAGGTCTT	CACCATCTAG	TCTGGGAAAT	TGTTGATAAC	TCAATTGACG	7680
AGGCCTTGGC	AGGATTTGCC	AGCCATATTC	AAGTTTTTAT	IGAGCCAGAT	GATTTCGATTA	7740
CTGTTGTGGA	TGATGGGCGT	GGTATCCCAG	TCGATATTCA	GGAAAAAACA	GGCCGTCCTG	7800

1048

CTGTTGAGAC CGTCTTTACA GTCCTTCACG CTGGAGGAAA GTTCGGCGGT GGTGGATACA	7860
AGGTTTCAGG TGGTCTTCAC GGGGTGGGGT CGTCAGTAGT TAATGCCCTT TCCACTCAAT	7920
TAGACGTTCA TGTTCACAAA AATGGTAAGA TTCATTACCA AGAATACCGT CGTGGTCATG	7980
TTGTCGCAGA TCTTGAAATA GTTGGAGATA CGGATAAAAC AGGAACAAC TTTCACTTCA	8040
CACCGGACCC AAAAATCTTC ACTGAAACAA CAATCTTTGA TTTTGATAAA TTAAATAAAC	8100
GGATTCAAGA GTTGGCCTTT CTAAATCGCG GTCTTCAAAT TTCAATTACA GATAAGCGCC	8160
AAGGTTTGGA ACAAACCAAG CATATATCAT ATGAAGGTGG GATTGCTAGT TACGTTGAAT	8220
ATATCAACGA GAACAAGGAT GTAATCTTTG ATACACCAAT CTATACAGAC GGTGAGATGG	8280
ATGATATCAC AGTTGAGGTA GCCATGCAGT ACACAAC TGG TTACCATGAA AATGTCATGA	8340
GTTTCGCCAA TAATATTCAT ACCCATGAAG GTGGAACACA TGAACAAGGT TTCCGTACAG	8400
CCTTGACACG TGTATCAAC GATTATGCTC GTAAAAATAA GTTACTGAAA GACAATGAAG	8460
ATAATTTAAC AGGGGAAGAT GTTCGCGAAG GCTTAACTGC AGTTATCTCA GTTAAACACC	8520
CAAATCCACA GTTTGAAGGA CAAACCAAGA CCAAATTGGG AAATAGCGAA GTGGTCAAGA	8580
TTACCAATCG CCTCTTCAGT GAAGCTTTCT CCGATTCCT CATGGAAAAT CCACAGATTG	8640
CCAAACGTAT CGTAGAAAAA GGAATTTTGG CTGCCAAGGC TCGTGTGGCT GCCAAGCGTG	8700
CGCGTGAAGT CACACGTAAA AAATCTGGTT TGGAAATTTC CAACCTTCCA GGGAACTAG	8760
CAGACTGTTC TTCTAATAAC CCTGCTGAAA CAGAACTCTT CATCGTCGAA GGAGACTCAG	8820
CTGCTGGATC AGCCAAATCT GGTGCTAACC GTGAGTTTCA GGCTATCCTT CCAATTCGCG	8880
GTAAGATTTT GAACGTTGAA AAAGCAAGTA TGGATAAGAT TCTAGCCAAC GAAGAAATTC	8940
GTAGTCTTTT CACAGCCATG GGAACAGGAT TTGGCGCAGA ATTTGATGTT TCGAAAGCCC	9000
GTTACCAAAA ACTCGTTTGT ATGACCGATG CCGATGTCGA TGGAGCCAC ATTCGTACCC	9060
TTCTTTTAAC CTTGATTIAT CGTTATATGA AACCAATCCT AGAAGCTGGT TATGTTTATA	9120
TTGCCCAACC ACCAATCTAT GGTGTCAAGG TTGGAAGCGA GATTAAAGAA TATATCCAGC	9180
CGGGTGCAGA TCAAGAAATC AAACCTCAAG AAGCTTTAGC CCGTTATAGT GAAGGTCGTA	9240
CCAAACCGAC TATTACGCGT TATAAGGGG TAGGTGAAAT GGACGATCAT CAGCTGTGGG	9300
AAACAACCAT GGATCCCGAA CATCGCTTGA TGGCTAGAGT TTCTGTAGAT GATGTGCAGA	9360
AGCAGATAAA ATCTTTGATA TGTGATGGG GATCGAGTTG TCCTCGTCG	9409

(2) INFORMATION FOR SEQ ID NO: 162:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6415 base pairs
 - (B) TYPE: nucleic acid

1049

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

CCTGGGAAAG TCTTGAAAAT TATGATAGAA TGGTGGAAGG AAAAATTCAG GAGAGTAGTA	60
GTGACTCAAA ATGTTGAAAAG TCTTCTCGTA TCCATTGTAA TCAGTGCATA CAATGAAGAA	120
AAATATCTGC CTGGTCTAAT TGAAGACTTA AAAAATCAAA CCTATCCTAA AGAGGATATT	180
GAAATTCTAT TTATAAATGC TATGTCCACA GATGGGACCA CAGCTATCAT TCAGCAATTT	240
ATAAAGGAAG ATACAGAGTT TAACTCAATT AGATTGTATA ACAATCCTAA GAAAAATCAA	300
GCTAGTGGTT TTAACCTGGG AGTTAAACAT TCTGTAGGGG ACCTTATTTT AAAAATTGAT	360
GCTCATTCAA AAGTTACTGA GACTTTTGTA ATGAACAATG TGGCTATTAT TCAACAAGGT	420
GAATTTGTCT GTGGGGGGCC TAGACCGACG ATTGTGGAAG GAAAAGGAAA ATGGGCAGAG	480
ACCTTGCATC TTGTTGAGGA AAATATGTTT GGCAGTAGCA TTGCCAATTA TCGAAATAGT	540
TCTGAGGATA GATATGTTTC TTCTATTTTT CATGGAATGT ATAAACGAGA GGTTTTCCAG	600
AAGGTTGGTT TAGTAAATGA GCAACTTGGC CGAACTGAAG ATAATGATAT TCATTATAGA	660
ATTCGAGAAT ATGCTTATAA AATCCGCTAT AGCCCAAGTA TTCTATCTTA TCAGTATATT	720
CGACCAACAT TCAAGAAAAT GCTGCATCAA AAGTATTCAA ATGGITTGTG GATTGGCTTG	780
ACAAGTCATG TTCAGTTTAA GTGTTTATCA TTATTTCACT ATGTTTCCTG TTTATTTGTT	840
TTGAGTCTTG TGTTTAGTCT AGCATTGTTA CCGATCACAT TCGTATTCAT AACTTTACTA	900
TTAGGTGCCT ATTTTCTACT TTTGTCATTA CTCACTTTCG TGACTTTATT AAAACATAAA	960
AATGGATTTT TAATTGTGAT GCCCTTTATT TTATTTTCCA TTCACTTTCG TTATGGCCTT	1020
GGGACGATTG TAGGTTTAAT TAGAGGATTT AAATGGAAGA AGGAGTACAA GAGAACAATA	1080
ATTTATTTGG ATAAAATAAG CCAAATAAAT CAAAATATGC TATAATAACA ATATAGTAAA	1140
ACTCTTTTAA GGAGGAGTAG ATTTCTATGA ATAAAAAAT AACAGATTAT GTGATTGATC	1200
TGGTGGAAT TTTAAATAAA CAACAAAAGC AGGTTTTCCTG GGGAAATATT GATATTTTCA	1260
GTATGGTGGT TTCCATCATT GTATCTTATA TTTTATTTTA TGGGCTGATT AATCCAGCAC	1320
CTGTTGACTA CATTATCTAT ACGAGTTTGG CCTTCCTGTT CTATCAATTG ATGATTGGTT	1380
TTTGGGGGTT GAACGCGAGC ATTAGTCGTT ACAGCAAGAT TACGGATTTC ATGAAAATCT	1440
TTTTTGGTGT GACTGCTAGC AGTGTCTTGT CATATAGTAT CTGTTATGCC TTCTTGCCAC	1500
TCTTCTCCAT CCGTTTCATC ATTCTCTTTA TCTTGTTGAG TACCTTCTTG ATTTTATTGC	1560

1050

CACGGATTAC TTGGCAGTTA ATCTACTCCA GACGCAAAAA AGGTAGTGGT GATGGAGAAC	1620
ACCGTCGGAC CTTCTTGATT GGTGCCGGTG ATGGTGGGGC TCTTTTATG GATAGTTACC	1680
AACATCCAAC CAGTGAATTA GAACTGGTCG GTATTTTGGG TAAGGATTCT AAGAAAAAGG	1740
GTCAAAAAC TGGTGGTATT CCTGTTTGG GCTCTTATGA CAATCTGCCT GAATTAGCCA	1800
AACGCCATCA AATCGAGCGT GTCATCGTTG CGATTCCGTC GCTGGATCCG TCAGAATATG	1860
AGCGTATCTT GCAGATGTGT AATAAGCTGG GTGTCAAATG TTACAAGATG CCTAAGGTTG	1920
AAACTGTGT TCAGGGCCTT CACCAAGCAG GTACTGGCTT CCAAAAAATT GATATTACGG	1980
ACCTTTTGGG TCGTCAGGAA ATCCGTCCTG ACGAATCGCG TCTGGGTGCA GAACTGACAG	2040
GTAAGACCAT CTTAGTCACA GGAGCTGGAG GTTCAATCGG TTCGTAAATC TGTCTCAAG	2100
TTAGTCGCTT CAATCCTGAA CGCATGTGCT TGCTCGGTCA TGGGGAAAAC TCAATCTACC	2160
TTGTTTATCA TGAATTGATT CGTAAGTTCC AAGGGATTGA TTATGTACCT GTGATTGCGG	2220
ACATTCAAGA CTATGATCGT TTGTTGCAAG TCTTTGAGCA GTACAAACCT GCTATTGTTT	2280
ATCATGCGGC AGCCCAACAAG CATGTTCTTA TGATGGAGCG CAATCCAAAA GAAGCCTTCA	2340
AAAACAATAT CCGTGGAAC TACAATGTTG CTAAGGCTGT TGATGAAGCT AAAGTGCTTA	2400
AGATGGTTAT GATTTCGACA GATAAGGCAG TCAATCCACC AAATGTTATG GGAGCAACCA	2460
AGCGCGTGGC GGAGTTGATT GTCACTGGCT TTAACCAACG TAGCCAATCA ACCTACTGTG	2520
CAGTTCGTTT TGGGAATGTT CTTGGTAGCC GTGGTAGTGT CATTCAGTC TTTGAACGTC	2580
AGATTGCTGA AGGTGGGCCT GTAACGGTGA CAGACTTCCG TATGACCCGT TACTTTATGA	2640
CCATTCCAGA AGCTAGCCGT CTGGTTATCC ATGCTGGTGC TTATGCCAAA GATGGGGAAG	2700
TCTTTATCCT TGATATGGGC AAACCAGTCA AGATTTATGA CTTGGCCAAG AAGATGGTGC	2760
TTCTAAGTGG CCACACTGAA AGTGAAATTC CAATCGTTGA AGTTGGAATC CGCCAGGTG	2820
AAAAACTCTA CGAAGAACCT TTGGTATCAA CCGAACTCGT TGATAATCAA GTTATGGATA	2880
AGATTTTCGT TGGTAAGGTT AATGTCATGC CTTTGAATC CATCAATCAA AAGATTGGAG	2940
AGTTCCGCAC TCTCAGTGA GATGAGTTGA AGCAAGCTAT TATCGCCTTT GCTAATCAAA	3000
CAACCCACAT TGAATAAAAA AGAAAAACGC ATAGTATCAA GTTACACAAC CTTGGTAATA	3060
TGCGTTTAT TATGTAGAGA CTTATACTCT TCGAAAATCT CTTCAAACCA CGTCAACGTC	3120
GCCTTGCCGT ATATGGTTAC TGACTTCGTC AGTTCTATCC ACAACCTCAA AACAGTGTTC	3180
TGAGyTGACT TCGTCAGTTC TATCCACAAC CTCAAAACAG TGTTTTGAGc TGACTTCGTC	3240
AGTTCTATCC ACAACCTCAA AACAGTGTTC TGAGCTGAcT TCGTCAGTTC CATCCACAAC	3300
CTTAAACAG TGTTTTGAGy TGACnTTCGT CAGTTCCATC TACAACCTTA AACAGTGTTC	3360

1051

TTGAGCTGCC CGCAGCTAGT TTCCTAGTTT GCTCTTTGAT TTTCATTGAG TATTACTTCA	3420
TTTTCTTCTG AAATGGAATT GTTACCCAGT CTATGCTATT GAAAATACGC CAAAACCTCT	3480
AAGGGTTTGT GAGCGATATA ATCAGGTTGA TAGTTTAGTA GATCTGCTTG CTCTCCAAAT	3540
CCCCAAGTGA TGGCCAAATT CTGAATACCT GTTCTCTGAG CTCCCAGCAT ATCAAACCTG	3600
GTATCTCCGA TGATGATGGC TTGTTCTGGT GCTAGTTGAT GTGTCTGCAA GGCTTGGTGA	3660
ATGACATCTG CCTTATGGGG TGCTTCAGGG CTAGAACCAT AAATGCCATC AAAGAAATGA	3720
TGGATTTCCA AGTTTTTTC CATGTCTTGA GCAGTAGATG TATCCTTTGT CGTGGTGATG	3780
TAGAGTGGAT AACTGCTCGA TAACTCCTCA AGCAAGTCTA TAATCTGAGG AAAGAGTTGA	3840
GCTTCATAGA TGCCTTTTGC CTTATAGTAA GAACGATATA TCTGCACGGC TTCAGAAATT	3900
TGGTCTTTTG ACAGGCAGGT CGCAAACTA CTTTCGAGAG GTGGTCCCAT AAAACCACGA	3960
ATAGTTTTGG CATCAGGGCT AGGCACCCCC AGCTCTTTAA AGGTATAGGT AAAGGCATTG	4020
TGAATCCCGA TAGAACTATC AACGAGGGTT CCATCCAAAT CGAAAAAAT CGCTGTGATA	4080
GAGGTCATGG TTTCTCCTAT TTGATAAGCT TATCTCCGA AAATTTCTTT TTGGAGGCGA	4140
CGACCACTAG GGGTGGTAGC GAGTCCACCT TCAGCTGTTT CACGAAAGGC AGTTGGCATG	4200
CTTGCTCCTA CTTGGTACAT GGCATCGATC ACTTCATCCA CAGGGATTTT AGATTCGATA	4260
CCTGCCAAGG CCATGTCTGC TGCATGAAA GCAAAGCTAG CTCCCATGGC ATTACGTTTG	4320
ACACAGGGAA CTTGACCAA ACCTGCAACA GGGTCACAGA TGAGGCCTAG CATATTTTAA	4380
ATGACAAAGG CAATAGCTTG ACTGGCCTGA TAAGGTGTTT CACCTGCAGC CAGAGTCAAG	4440
GCGGCAGCAC TCATAGCAGA GGCTGAACCA ACTTCAGCTT GACACCCACC CTCAGCACCT	4500
GAGATGGAGG CATTGTTTGC GATGACTAGT CCAAAGGCAC CAGCAGCAA GAGGAAATCC	4560
AATTGTTCCT CGTGGCTGAG GTCTAATTTT TCAATAGCAG CACTGAGAAC GGATGGCAGA	4620
CAGCCAGCAC TTCCAGCGGT TGGAGTGGCA CAGACCAAGC CCATTTTGGC ATTGTGTTCA	4680
TTGACTGCGA TGGCATTTCG GGCAGCCGAG AGAATCGTAT AATCTGACAG AGTTTTTCCG	4740
TTTTCGATGT AGTGATCCAA TTTGGCAGCA TCTCCACCTG TCAGGCCACT ACGAGATTTA	4800
TTTTCATTGA GGCCAAGTTG GACAGAGGCT TTCATAACTT CCAGATTGCG TTCCATGAGA	4860
AGGAAGACTT CTTACGTTT GCGACCGGTC AATTCAAACCT CTGTTGTAAT CATGAGTTCT	4920
GCGACATTC CTTGAAAGTC CAGATCTGCT TGCTCGACCA ATTCTTTGAT AGAATAAAAC	4980
ATGCTTCCTC CTATTTAAAG AAATTGACAT TGTGGAGATG AGGGATTTTT CGAATTTCTT	5040
CGATAGCCTC ATCACAGTTG CGACTGTCFAA CTTGATAAT CATAATGGCT TTTTCACCAG	5100

1052

CTTTTTCACG AGTGACATTC ATCTGGGCGA TATTGATACC ATAGCGGGAA AGCGCCTCTG	5160
TAACAAGGGC AATCATACCT GGAATATCTT GATGAACGAT GATGATAGTC GGTGTATTCA	5220
TATTGAGAGA GACGGCAAAA CCATTGAGTT CGGTTACCTG AATATTTCCT CCACCGATAG	5280
AAATACCAGT CACGCTGATG GTCTTGTGGG CATTTTAAAC AGTAATTTTA GTGGTGTAG	5340
GGTGAGGGGC ATTGCTGTCT TTCTGAATGG TCCAGACAAT CTTGATACCA CGCTTGTGGG	5400
CAATTTCAG ACTATTGGA ATTTCAGGAT CATCTGTATC CATTCTAAA ATACCTGCAA	5460
CAAGGGCTAG GTCTGTCCG TGACCACGAT AGGTCTTGGC AAATGAGTTA AAAAGTTGGA	5520
ATTCAACTTC TGTCCGAGTA TCATCAAAAA TGGAAGAGAC AATCTTCCCA ATACGAACAG	5580
CACCAGCGGT ATGGCTACTA GATGGGCCAA TCATAACTGG TCCGATGATA TCAAAGACAG	5640
ATTGAAAACG AAGTGATTTC ATCAGTTTCC CCTTATAAAA ATTCTTATCT CTATTATATC	5700
AAAGAATGAG GGGCTTGGCT TTAATTGTGG ATGAAAACCT TTCTAATACC TCAAATAGCA	5760
TAAAAATAGT ATCTTTTATG ACAAAAAACA CCTTATTTAG GGAAATAAAA AATAATTTTG	5820
TAATATTCT ACATAAAGT GTCAAGAAAC GGTAAATTTT AAAGGGTATG ATAGAACTAT	5880
AGAAAGAAGG AGAATTTTCG AATATGAAAT CAATAACTAA AAAGATTAAA GCAACTCTTG	5940
CAGGAGTAGC TGCCTTGTTT GCAGTATTTG CTCCATCATT TGTATCTGCT CAAGAATCAT	6000
CAACTTACAC TGTAAAGAA GGTGATACAC TTTCAGAAAT CGCTGAAACT CACAACACAA	6060
CAGTTGAAAA ATTGGCAGAA AACAACCACA TTGATAACAT TCATTTGATT TATGTTGATC	6120
AAGAGTTGGT TATCGATGGC CCTGTAGCGC CTGTTGCAAC ACCAGCGCCA GCTACTTATG	6180
CGGCACCAGC CGCTCAAGAT GAAACTGTTT CAGCTCCAGT AGCAGAAACT CCAGTAGTAA	6240
GTGAAACAGT TGTTCACACT GTAAGCGGAT CTGAAGCAGA AGCCAAAGAA TGGATCGCTC	6300
AAAAACAATC AGGTGGTAGT ATACAGCTAC AAATGGACGT TATATCGGAC GTTACCAATT	6360
AACAGATTCA TACCTGAACG GTGACTACTC AGCTGAAAAC CAAGAACGGG TACCG	6415

(2) INFORMATION FOR SEQ ID NO: 163:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8494 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

TACCCCTTTC GAATTTTGGC AAAAATTCGG TAAGGCTTTG ATGGTAGTTA TCGCGGTAT	60
GCCGGCTGCT GGTTTGATGA TTTCAATCGG TAAGTCTATC GTGATGATTA ACCCAACCTT	120

1053

TGCACCACTT GTCATCACAG GTGGAATTCT TGAGCAAATC GGTGGGGGGG TTATCGGTAA	180
CCTTCACATT TTGTTTGCCC TAGCCATTGG AGGAAGCTGG CCTAAAGAAC GTGCTGGTGG	240
TGCTTTCGCC GCTGGTCTTG CCTTCATCTT GATTAAACCGT ATCACTGGTA CAATCTTTGG	300
TGTATCAGGC GATATGTTGA AAAATCCAGA TGCTATGGTA ACTACTTTCT TTGGTGGTTC	360
AATCAAAGTT GCTGATTACT TTATCAGTGT TCTTGAAGCT CCAGCCTTGA ACATGGGGGT	420
ATTCTAGGG ATTATCTCAG GTTTTGTAGG GGCAACTGCT TACAACAAAT ACTACAACCTT	480
CCGTAAACTT CCTGATGCAC TTTCATTCTT CAACGGGAAA CGTTTCGTAC CATTTGTAGT	540
TATCTCTCGT TCAGCAATCG CTGCAATTCT ACTTGCTGCT TTCTGGCCAG TAGTTCAAAC	600
AGGTATCAAT AACTTCGGTA TCTGGATTGC CAACTCACAA GAAACTGCTC CAATTCTTGC	660
ACCATTCTTG TATGGTACTT TGGAACGTTT GCTCTTGCCA TTTGGTCTTC ACCACATGTT	720
GACTATCCCA ATGAACTACA CAGCTCTTGG TGGTACTTAT GACATTTTAA CTGGTGCAGC	780
TAAAGGTACT CAAGTATTCG GTCAAGACCC ACTATGGCTT GCATGGGTAA CAGACCTTGT	840
AAACCTTAAA GGTACTGATG CTAGTCAATA TCAACACTTG TTAGATACAG TACATCCAGC	900
TCGTTTCAAA GTTGACAAA TGATCGGTTC ATTCGGTATC TTGATGGGTG TGATTGTTGC	960
TATCTACCGT AATGTTGATG CTGACAAGAA ACATAAATAC AAAGGTATGA TGATTGCAAC	1020
AGCTCTTGCA ACATTCTGA CAGGGGTAC TGAACCAATC GAATACATGT TCATGTTTAT	1080
CGCAACACCT ATGTATCTTG TTTACTCACT TGTTCAGGT GCTGCCCTCC CTATGGCTGA	1140
CGTCGTAAC CTACGTATGC ACTCATTCGG TTCAATCGAG TTCTTGACTC GTACACCTAT	1200
TGCAATCAGT GCTGGTATTG GTATGGATAT CGTTAACTTC GTTGGGTAA CTGTTCTCTT	1260
TGCTGTAATC ATGTACTTTA TCGCAAACCT CATGATTCAA AAATTCAACT ACGCAACTCC	1320
AGGGCGCAAC GGAAACTACG AAAGTCTGA AGGTTGAGAA GAAACCAGCA GCGAAGTGAA	1380
AGTTGCAGCA GGCTCTCAAG CTGTAAACAT TATCAACCTT CTTGGTGGAC GTGTAAACAT	1440
CGTTGATGTT GATGCATGTA TGACTCGTCT TCGTGTAAT GTTAAAGATG CAGATAAAGT	1500
AGGAAATGCA GAGCAATGGA AAGCAGAAGG AGCTATGGGT CTTGTCATGA AAGACAAGG	1560
GGTTCAAGCT ATCTACGGTC CAAAAGCTGA CATTTTGAAA TCTGATATCC AAGATATCCT	1620
TGATTACAGT GAAATCATTC CTGAAACTCT TCCAAGCCAA ATGACTGAAG CACAACAAAA	1680
CACTGTTCAC TTCAAAGATC TTAGTGAGGA AGTTTACTCA GTAGCAGACG GTCAAGTTGT	1740
TGCTTTGGAA CAAGTAAAG ATCCAGTATT TGCTCAAAAA ATGATGGGTG ATGGATTTGC	1800
AGTAGAACCT GCAAATGGAA ACATTGTATC TCCAGTTTCA GGTACTGTGT CAAGCATCTT	1860

1054

CCCCAACAAA	CATGCTTTTG	GTATTGTGAC	GGAAGCAGGT	CTTGAAGTAT	TGGTTCACAT	1920
TGGTTTGGAC	ACAGTAAGTC	TTGAAGGTAA	ACCATTTACA	GTTTCATGTTG	CTGAAGGACA	1980
AAAAGTTGCA	GCAGGAGATC	TCCTTGTCAC	AGCTGACTTG	GATGCTATCC	GTGCAGCAGG	2040
ACGTGAAACT	TCAACAGTAG	TTGTCTTCAC	AAATGGTGAT	GCAATTAAAT	CAGTTAAGTT	2100
AGAAAAACA	GCTTCTCTTG	CAGCTAAAAC	AGCAGTTGCT	AAAGTAGAAT	TGTAATATAC	2160
TTGAGGTTGG	AAGCTGTATT	CCAACCTCTT	ATTTTGGGAG	AAAAGAATGA	AATTTTAAAC	2220
ACTCAATACT	CACAGTTGGA	TGGAGAAAGA	AGCAGAGGAA	AAATTCAGAG	TTTGTGCTTG	2280
AGATATTCTT	GAAAAGGACT	ATGATTTGAT	TTGTTTTCAC	GAAATCAATC	AGGAGATGAC	2340
CTCGTCAGAG	TGGAGGTTA	ATGACCTTTA	TCAAGCTTTG	CCAGCAGCTG	AGCCTATTCA	2400
CCAAGACCAT	TATGTTAGAC	TCTTGGTTGA	AAAGTTGTCT	GAGCAAGGGA	AAAATTACTA	2460
CTGGACCTGG	GCCTATAACC	ATATCGGCTA	TAACCGCTAC	CACGAAGGTG	TGGCTATCTT	2520
GTCTAAAACA	CCTATTGAAG	CCAGAGAAAT	TTTGGTTTCA	GATGTGGATC	ATCCAACAGA	2580
CTATCATACT	CGCCGTGTTG	CCCTAGCTGA	AACTGTAGTC	GATGGCAAGG	AGCTAGCAGT	2640
TGCCAGTGTT	CATCTCTCTT	GGTGGGATAA	AGGTTTCCAA	GAAGAATGGG	CACGATTTGA	2700
GGCTGTCTTG	AAAAAATTGA	ACAAGCCACT	TTTACTAGCT	GGAGATTTCA	ACAATCCGGC	2760
TGGACAGGAA	GGTTACCAAG	CTATTTTAGC	TAGTCCATTA	GGCTTACAAG	ACGCATTTGA	2820
AGTTGCCTCA	GAGAAAAGTG	GTAGCTATAC	TGTTCCGCCT	GAAATTGATG	GCTGGAAAGG	2880
GAACACTGAA	CCCCTTCGAA	TCGATTATGT	CTTTACTACC	AAAGAGTTAG	CGGTGGAAAA	2940
TTTACATGTC	GTATTTGATG	GTAACAAGAG	TCCACAAGTG	AGTGATCACT	ATGGCTTGAA	3000
TGCTATATTA	AACTGGAAAT	AATAACTGAA	AAGAGGTTGG	AACTATAAAA	TTCCAGCCTT	3060
TTCTTACTAG	AGAAGCTACT	GGAAATAGCC	TAAATAAGTG	AGACTACTGT	AATGGAATAA	3120
AATATGGTAT	AATTGATAAG	GTAGATAGAA	TCGAGGATGT	TATGTCATTT	ACGAAATTTT	3180
AATTTAAAAA	CTATATTAGA	GAAGCCTTGA	AGGAGTTAAA	ATTTACAAC	CCAACAGAGG	3240
TGCAAGACAA	GTTGATTCCT	ATTGTTTGG	CAGGTCGTGA	CCTAGTAGGA	GAATCAAAAA	3300
CAGGTTTCA	TAAGACTCAT	ACTTTCTTGT	TACCGATTTT	CCAGCAATTA	GATGAAGCTA	3360
GCGATAGTGT	ACAAGCAGTG	ATTACTGCAC	CGAGTCGTGA	GTTGGCTACT	CAAATTTACC	3420
AAGTAGCGCG	TCAGATTTCA	GCTCACTCAG	ATGTCGAAGT	TCGTGTGGTT	AATTATGTGG	3480
GTGGTACGGA	TAAGGCTCGC	CAGATTGAGA	AATTGGCAAG	CAATCAGCCT	CATATTGTTA	3540
TTGGAACACC	AGGCCGTATC	TACGACTTGG	TTAAATCTGG	TGATTTAGCT	ATTTCATAAG	3600
CCAAGACATT	TGTTGTTGAT	GAAGCAGATA	TGACCTTGGA	TATGGGATTC	TTGGAAACTG	3660

1055

TTGATAAGAT TGCTGGCAGT CTTCCAAAAG ACTTGCAATT CATGGTCTTC TCAGCGACTA	3720
TCCCACAAAA ACTGCAACCA TTCTTGAAAA AATACTTATC AAATCCTGTT ATGGAGAAAA	3780
TTAAGACCAA AACGGTTATT TCTGACACCA TTGATAATTG GTTGATTTCG ACCAAGGGAC	3840
ATGATAAGAA TGCTCAAATT TACCAGTTGA CTCAGTTGAT GCAGCCGTAT TTGGCAATGA	3900
TTTTTGTTAA CACTAAAACG CGTGCTGATG AATTGCATTC ATATCTGACT GCTCAAGGCT	3960
TGAAGGTTGC AAAAAATCCAT GCGGATATTG CCCCTCGTGA ACGCAAGCGA ATCATGAATC	4020
AGGTGCAAAA TCTGGATTTT GAGTATATTG TCGCAACAGA TTTGGCAGCG CGTGGGATTG	4080
ACATTGAAGG TGTGAGCCAT GTCATCAATG ATGCCATTCC GCAAGACTTA TCTTTTTTTG	4140
TPCATCGTGT TGGTCGTACT GGACGAAATG GCCTACCAGG TACAGCTATT ACCCTTTATC	4200
AGCCAAGTGA TGACTCGGAT ATCCGTGAGT TGGAGAAATT GCGAATCAAG TTTAGTCCTA	4260
AGATGGTCAA AGACGGGGAA TTTCAAGATA CCTATGACCG TGATCGTCGT GCCAACCGTG	4320
AGAAAAACA AGATAAATT GATATCGAAA TGATTGGTTT GGTAAAAAG AAAAAGAAAA	4380
AAGTCAAACC GGGTTATAAG AAGAAAATTC AATGGCGCGT TGATGAAAAG CGCCGTAAAA	4440
CCAAGCGTGC TGAAAATCGC GCTCGCGGTC GTGCAGAGCG TAAAGCTAAA CGCCAAACAT	4500
TTTAATAGAA ATTGTTGGAG TATTGAGCTC CAACTTTTTT ATTTATGAGA ACGAACTATC	4560
TAAACCGAAA CACTACATTA AAGACTGCAA ATTGCGATTA AAAATGGTAT AATGATAAAG	4620
TTATATAGTC CCGATAAGAT GGTAGGTATT TATTACGAAG AGTTTTCCTA TCAGTACTTT	4680
GTAACCTCTAT AACAATATTT TTTAAGGGGG GACATTTTTA TGTCAGAGCG TAAATTATTC	4740
ACGTCTGAAT CTGTATCTGA GGGGCATCCG GATAAGATTG CAGACCAAAT TTCAGATGCG	4800
ATTTTGGAATG CTATTTTAGC AAAGGATCCA GAGGCGCACG TTGCTGCTGA AACAGCTGTA	4860
TATACTGGTT CTGTCCACGT TTTTGGTGAA ATTTCTACAA ATGCCTATGT GGATATTAAC	4920
CGTGTGGTTC GTGATACCAT TGCAGAGATT GGTATACCA ATACAGAATA TGGATTTTCT	4980
GCTGAGACGG TGGGAGTACA CCCATCTTTG GTGGAACAAT CTCTGACAT CGCTCAAGGT	5040
GTTAACGAAG CCTTGAGGT TCGTGAAAT GCTGATCAAG ATCCACTGGA CTGATTGGA	5100
GCAGGTGACC AAGGGCTCAT GTTTGGATTT GCAGTAGATG AAACAGAAGA GCTTATGCCA	5160
TTGCCAATTG CACTCAGTCA TAAATTGGTT CGTCGTCTGG CAGAACTTCG TAAGTCTGGA	5220
GAAATTAGCT ATCTCCGTCC AGATGCAAAA TCACAAGTTA CAGTTGAGTA CGATGAAAAAT	5280
GACCGTCCGG TACGTGTAGA TACAGTCGTT ATTTCTACTC AGCATGATCC AGAGGCGACT	5340
AATGAACAAA TCCATCAAGA TGTGATTGAC AAGGTCATCA AAGAAGTIAT TCCATCTTCT	5400

1056

TATCTTGATG ATAAGACAAA ATTCTTTATC AATCCGACAG GTCGTTTTGT AATCGGTGGT	5460
CCTCAAGGGG ACTCAGGTTT GACTGGTCGT AAGATTATTG TAGATACTTA TGGTGGCTAC	5520
TCTCGTCATG GTGGTGGTGC CTTCTCTGGT AAAGATGCGA CTAAGGTGGA TCGTTCAGCC	5580
TCTTATGCGG CTCGCTATAT TGCCAAGAAT ATCGTTGCAG CAGACCTTGC TAAGAAGGCA	5640
GAAGTGCAGT TGGCCTATGC TATCGGTGTT GCGCAACCTG TTTCTGTTTCG TATCGATACT	5700
TTCCGTACAG GAACAGTAGC TGAAAGTCAA CTTGAAAAAG CGGCTCGTCA AATCTTTGAC	5760
CTTCGCCCTG CAGGGATTAT CCAAAATGCTG GACCTCAAGC GTCCAATTTA CCGTCAAACA	5820
TCGGCTTACG GTCACATGGG ACGTACAGAT ATTGATCTTC CATGGGAACG TTTGGATAAG	5880
GTAGATGCTT TGAAAGAAGC AGTAAATAA GATTTTAAGA GGGGAACGTC CTCTCTTTTT	5940
TATAGTTTTT AACTATACTG GGATACTGTT CTGAAAATCC ATTTTGCGAA AGTAGAGATT	6000
TACATGTATA GTAGATTGAA ACTAGAATAG TACACCTCAA CTTCTAAAAC ATTGTTAGCA	6060
ATCAATTTGA CTGTCCTGAT CGATTTCCTC TGTTCTTGTT TCATTTTACT ATATTTCTTT	6120
AAAAATGATA AAGGTTAAGA TTTCTCCTCG TAATAGATAA TCTTGGGGAT ATTTCAATCC	6180
AAAGTTTAT TCGTTATCAC TTGACTATTG CAAGGTTTTT TAGAGCAACA GAGTCATGGA	6240
ATGGACTCAT GGTGAGATT TCTCCTGTT GCTTGGACTT CATTCAAAG TCTGTTACCC	6300
AAGCCTTGTT CAAACTTCTA ATACACTAGC TGTTTCCATA GCATGACTTC TGTAAGTAC	6360
TTTCTTTTCC GAATAAATAG ATAGAACCAC AGAATCTAGT AAACCTAGAA TTAATAATAT	6420
GGTATAATAT TAGCAATAAA AGAAATCTGG AGGATTAGAA TCATGGTATC AACGAAAACA	6480
CAAAATGCTG GTTTGAGTT TGACAATTGC TTGATGAATG CAGCAGGTGT GGCTTGATG	6540
ACGATAGAGG AGTTAGAAGA GGTCAAAAAC TCAGCGGCAG GAACCTTTGT TACTAAGACA	6600
GCGACCTTGG ACTTCCGTCA GGGGAATCCT GAGCCACGCT ACCAAGATGT TCCACTTGGT	6660
TCCATCAACT CTATGGGCTT GCCAAATAAT GGCTTAGACT ATTATTTGGA TTATCTTTTA	6720
GATTGTCAGG AAAAAGAGTC GAACCGAACT TTCTTCTTAT CTCTGGTCGG CATGTCTCCA	6780
GAGGAAACCC ATACTATTTT GAAAAAAGTC CAAGAGAGTG ATTTTCGTGG TCTGACTGAG	6840
CTAAATCTTT CCTGTCCAAA TGTTCAGGT AAACCTCAGA TTGCCTATGA TTTTGAGACA	6900
ACAGACCGGA TTTTGGCAGA AGTGTTCGCT TACTTCACCA AACCTCTTGG AATTAAATTG	6960
CCACCTTATT TTGATATTGT TCACCTTGAC CAAGCGGCAG CTATTTTCAA CAAATATCCG	7020
CTCAAGTTTG TCAACTGCGT TAACTCTATC GGAACGCGC TCTATATAGA AGACGAATCT	7080
GTCGTTATTC GGCCTAAGAA TGGTTTGGT GGAATTGGTG GAGAATACAT CAAACCGACT	7140
GCTTTAGCCA ATGTTACGC CTTTATCAA CGTTTAAATC CTCAAATCCA AATTATCGGA	7200

1057

ACAGGTGGCG TTCTGACTGG TCGAGATGCC TTTGAACACA TCCTCTGTGG AGCAAGTATG 7260
 GTGCAGGTGG GAACGACCCT TCACAAAGAA GGCCTCAGTG CTTTGGACCG CATTACCAAT 7320
 GAAGTGAAAG CAATCATGGT GGA AAAAGGC TACGAGAGCT TAGAAGATTT CCGTGGGAAA 7380
 TTGCGCTATA TTGACTAAAT TAAATCGAAA AATCTGAAGA AAGGAGAGAC GATGCTAGCC 7440
 ATTGAAGAAA GTCAGAAGTT GACTTTATCA AATTTACCGA GCCTGAGCCT ATTTACAGGG 7500
 ACAGATCAGG GTCAGTTTGA AGTGATGAAG AGTCAAATGT TGAAACAGAT TGGGTATGAT 7560
 TCTGCTGACC TCAACTTTGC CTACTTTGAT ATGAAAGAAG TAGTTTACAA GGATGTGGAA 7620
 CTGGAGTTGG TCAGCCTTCC TTTCTTTGCG GATGAGAAAA TCGTGATATT AGATTATTTT 7680
 ATGGATATCA CGACTGCTAA GAAACGCTTT TTGACAGATG ATGAGCTTAA GTCATTTGAG 7740
 GAATACCTTG ACAATCCTTC TCCAACAACC AAGTTGATAA TCTTTGCAGA AGGAAAGCTG 7800
 GATAGCAAAA GACGGTTAGT CAAATTACTT AAGCGTGATG CCAAGGCCTT CGATGCAGTA 7860
 GAAGTAAAAG AACAAGAATT GCGCCAGTAC TTCCAAAAGT GGAGTCAGAA ACAAGGTCTG 7920
 CAGTTTACCA ATCATTCTTT TGAAAATCTC CTCATCAAGT CGGGGTTTCA ATTTAGCGAA 7980
 ATCCAGAAAA ATCTTCTCTT TTTACAGTCC TATAAGGCGA ATTCTGTTAT TGAGGAAGAG 8040
 GATATTGTTA ACGCAATTCC CAAGACTTGC AGGACAATAT TTTTGATTTA ACTCAGTTTA 8100
 TTCTGACTAA AAAGATGGAT CAGGCGCGCG ATTTGGTGAG AGACTTGACC TTGCAAGGGG 8160
 AAGATGAAAT CAAACTGATT GCAGTCATGC TGGGACAATT TCGGACTTTT ACTCAGGTGA 8220
 AGATTTTGGC GGAGTCTGGC CAAACAGAAT CGCAGATTGC AAGTAGTTTA GGTAGTTATC 8280
 TGGGACGTAA CCCAAATCCT TATCAAATCA AGTTTGCAAT AAGAGATTCG AGAGGACTTT 8340
 CTTTGAGCTT TTTGAAGCAA GCTATTTCTT ATTTGATTGA GACAGACTAT CAGATTAAGA 8400
 CAGGTCTTTA TGAAAAAGGT TTCCTTTTGG AAAAGGCACT CTTACAGATT GCTAGTCAGG 8460
 TCAATTGACA TTTGTTGAAA CTACTAACCC GCGG 8494

(2) INFORMATION FOR SEQ ID NO: 164:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9707 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

CCGGTCAGTT CGTTCAGTAC AAGGAATCAT AATGAACGAT CAATCAGAAA AAAAGACTAG 60

1058

AAAGAAGACT GTATGGATAA TCGACCAATT GGTTTTTTGG ATTCGGGTGT CGGGGGCTTG	120
ACCGTTGTGC GCGAGCTCAT GCGCCAGCTT CCCCATGAAG AAATCGTCTA TATTGGAGAT	180
TCGGCGCGGG CGCCCTATGG CCCCCGTCCT GCTGAGCAAA TTCGTGAATA TACTTGGCAG	240
CTGGTCAACT TTCTCTTGAC CAAGGATGTC AAAATGATTG TCATTGCTTG TAACACTGCG	300
ACTGCGGTCTG TCTGGGAAGA AATCAAGGCT CAACTAGATA TTCCTGTCTT GGGTGTAATT	360
TTGCCAGGAG CTTTCGGCAGC CATCAAGTCC AGTCAAGGTG GGAAAATCGG AGTGATTGGA	420
ACGCCCATGA CGGTACAATC AGACATATAC CGTCAGAAAA TCCATGATCT GGATCCCGAC	480
TTACAGGTGG AGAGCTTGGC CTGTCCCAAG TTTGCTCCCT TGGTTGAGTC AGGTGCCCTG	540
TCAACCACTG TTACCAAGAA GGTGGTCTAT GAAACCCTGC GTCCCTTGGT TGGAAAGGTG	600
GATAGCCTGA TTTTGGGCTG TACTCATTAT CCACTCCTTC GCCCTATTAT CCAAAATGTG	660
ATGGGGCCAA AGGTTTCAGCT CATCGATAGT GGGGCAGAGT GCGTACGGGA TATCTCAGTC	720
TTACTCAATT ATTTTGAAAT CAATCGTGGT CGCGATGCTG GACCACTCCA TCACCGTTTT	780
TACACAACAG CCAGTAGCCA AAGTTTGTGA CAAATTGGTG AAGAATGGCT GGAAAAAGAG	840
ATTTCATGTG AGCATGTAGA ATTATGACAA ATAAAATTTA TGAATATAAG GATGACCAGG	900
ACTGGTATGT TGGGTCTTAT AGTATTTTTG GTGGCGTTAA CAGTTTGAGC GACTATAAGA	960
CAGATTTTCC TCTGTTTGAA TTCTCCAAAA TATTGGAGA TGAAGAGTAT GGTTTCCCGC	1020
TTTCAGTTAC TGTTTTACGC TATGGTTCTA TCTACCGTTT GTTCTCCTTT GTGGTAGACA	1080
TGCTTAATCA AGAAATGGGA CGAAACTTGG AAGTTATTCA ACGTCATGGG GCCCTGCTCT	1140
TGGTTGAAAA TGGGCAATC TTGTATGTAG AATTGCCTAA AGAAGGGGTC AATGTTTCATG	1200
ATTTCTTTGA GACAAGCAAG GTCAGAGAAA CCTTGTGAT TCGGACTCGT AACGAAGGTA	1260
AAACCAAGGA ATTCGAGCT ATCTTTGATA AGTTAGGCTA CGATGTGGAA AATCTTAATG	1320
ACTACCCCTGA CCTGCCTGAA GTAGCAGAAA CAGGTATGAC CTTTGAAGAA AATGCCCGCC	1380
TTAAGGCAGA AACCATTCT CAATTAACGG GCAAGATGGT TTTGGCAGAT GATTCTGGTC	1440
TCAAAGTCGA TGTCCTTGGT GGCTTACCAG GCGTCTGGTC AGCTCGTTTC GCAGGTGTGG	1500
GAGCAACTGA CCGTGAAAAT AATGCCAAAC TCTTGACGA ATTGGCCATG GTCTTTGAAC	1560
TCAAGGACCG CTCGGCTCAG TTCCACACAA CCCTAGTCGT AGCCAGCCCA AATAAGGAAA	1620
GTTTAGTTGT TGAAGCAGAC TGGTCAGGTT ATATTAACCT TGAACCTAAG GGTGAAAATG	1680
GCCTTGGCTA TGATCCCTC TTCTTGTAG GAGAAACAGG TGAGTCATCA GCTGAATTAA	1740
CCCTGGAAGA AAAAAATAGT CAATCTCACC GTGCCTTAGC CGTTAAGAAA CTTTGGAGG	1800
TATTTCCATC ATGGCAAAGC AAACCATCAT TGTAAATGAGC GATTCCCATG GCGATAGCTT	1860

1059

GATTGTGGAA GAAGTCCGTG ATCGCTATGT GGGCAAAGTC GATGCTGTTT TTCATAACGG	1920
CGATTCTGAA CTACGTCCGG ATTCTCCACT TTGGGAGGGC ATCCGCGTTG TTAAAGGGAA	1980
CATGGACTTC TACGCCGGCT ACCCAGAACG TCTGGTGACT GAGCTTGTTT CGACCAAGAT	2040
TATCCAAACT CATGGTCACT TGTTTGACAT CAATTTCAAC TTTCAAAAGT TGGACTACTG	2100
GGCTCAGGAG GAAGAGGCCG CTATCTGCCT CTATGGTCAC TTGCATGTGC CAAGTGCTTG	2160
GTTGGAAGGC AAGATCCTCT TTCTAAATCC AGGTTCTATC AGTCAACCAC GAGGTACCAT	2220
CAGAGAATGT CTCTATGCTC GTGTGGAGAT TGATGATAGT TACTTCAAAG TGGACTTTTT	2280
GACACGAGAT CACGAGGTGT ATCCAGGTTT GTCCAAGGAG TTTAGCCGAT GATTGCCAAG	2340
GAGTTTGAGA CTTTCTTGTT GGGGCAGGAG GAACTTTTTT TGACCCCTGC TAAAAATCTA	2400
GCTGTGTTGA TTGATACCCA CAATGCGGAT CATGCGACCC TCTTGCTCAG TCAGATGACC	2460
TATACCCGTG TTCCCGTTGT GACAGATGAA AAACAGTTTG TTGGGACGAT TGGACTCAGA	2520
GATATTATGG CTTATCAGAT GGAGCATGAC TTGAGCCAAG AAATCATGGC GGATACGGAT	2580
ATCGTTCATA TGACAAAAAC GGACGTAGCG GTTGTTTCGC CTGATTTTAC CATTACGGAG	2640
GTCTTGCACA AGCTAGTAGA TGAGTCCTTC TTACCGGTTG TGGATGCAGA GGGTATTTTC	2700
CAAGGGATTA TTACGCGCAA GTCCATCCTC AAGCCGTTA ATGCCCTCTT GCATGACTTT	2760
AGTAAGGAAT ATGAGATTCG ATGCCAATGA GAGACAGGAT TTCAGCCTTT TTAGAGGAAA	2820
AGCAGGGCTT GTCTGTCAAT TCCAAGCAGT CCTATAAGTA TGATTGGAG CAATTTTATAG	2880
ACATGGTAGG TGAGCGGATT TCTGAGACCA GTCTCAAGAT TTACCAAGCC CAGCTAGCCA	2940
ATCTAAAAAT CAGCGCCAG AAGCGAAAGA TTTCGGCCTG TAACCAATTT CTATACTTTC	3000
TCTATCAAAA AGGAGAGGTG GACAGCTTTT ACCGCTTGGA ATTAGCCAAA CAAGCTGAAA	3060
AGAAGACGGA AAAGCCAGAG ATTCTATACC TAGACTCTTT TTGGCAGGAA AGCGACCATC	3120
CAGAGGGCCG CTTGCTAGCG CTCTTAATCC TAGAAATGGG GCTCTTGCCC AGTGAGATTT	3180
TAGCCATCAA GGTGCGGAC ATCAATCTGG ATTTTCAGGT GTTGCGAATC AGCAAGGCTT	3240
CCCAACAGAG GATTGTCACC ATTCACACGG CCTTGCTTTC AGAATTGGAA CCCTTGATGG	3300
GGCAGACCTA TCTTTTGAAG AGAGGAGAGA AACCCTATTC TCGTCAGTGG GCCTTTCGTC	3360
AGTTAGAATC TTTTGTCAAG GAGAAAGGTT TTCCATCCTT ATCAGCTCAA GTCTTACGTG	3420
AACAGTTTAT TCTAAGACAA ATAGAAAACA AGGTCGATTT GTACGAAATT GCAAAAAAAT	3480
TAGGATTAAA AACAGTCCTG ACCTTAGAAA AATATAGATA ATGGATATTA AATTAAAAGA	3540
TTTGAAGGA CCCCTGGACT TGCTCTTGCA TCTGGTTTCT AAGTACCAGA TGGATATCTA	3600

1060

CGATGTGCCC ATTACGGAAG TCATCGAACA GTATCTAGCC TATGTCTCAA CCCTGCAGGC	3660
CATGCGTCTG GAAGTGACGG GTGAGTACAT GGTGATGGCT AGTCAGCTCA TGCTGATTAA	3720
GAGTCGTAAA CTCCTTCCGA AGGTAGCAGA AGTGACAGAC TTGGGGGATG ACCTGGAGCA	3780
GGACCTCCTC TCTCAAATCG AAGAATATCG CAAGTTCAAG CTCTTGGGTG AGCACTTGGA	3840
AGCCAAGCAC CAAGAACGGG CCCAGTATTA TTCCAAAGCG CCGACAGAGT TGATTTACGA	3900
AGATGCGGAG CTTGTGCATG ACAAGACGAC CATTTGACCTC TTTTGTGACTT TTTCAAATAT	3960
CCTAGCCAAG AAAAAAGAGG AGTTTGACACA AAATCACACG ACGATCTTGC GGGATGAGTA	4020
TAAGATTGAG GACATGATGA TTATCGTGAA AGAGTCCTTG ATTGGACGAG ATCAATTGCG	4080
CTTGCAAGGAT TTGTCAAGG AAGCCCAGAA TGTCCAAGAG GTCATCACCC TCTTTTGGC	4140
AACCCTAGAG TTAATCAAAA CCCAGGAGTT GATCCTCGTG CAAGAGGAGA GTTTTGAGGA	4200
TATCTATCTC ATGGAAGAGA AGGAAGAAAG TCAAGTGCTT CAAAGCTAGA CTGTGATAGAG	4260
AGGAAGATG AGTACTTTAG CAAAAATAGA AGCGCTCTTG TTTGTAGCGG GTGAAGATGG	4320
GATTCGGGTC CGCCAGTTAG CTGAACCTCT CTCTCTGCCA CCGACAGGCA TCCAGCAAAG	4380
TTTAGGAAAA TTAGCCGAGA AGTATGAAAA GGACCCAGAT TCCAGTTTGG CTTTGATTGA	4440
GACAAGTGGT GCTTATAGAT TGGTGACCAA GCCTCAATTT GCAGAGATT TGAAGGAATA	4500
CTCTAAGGCG CCTATCAACC AGAGCTTGTC TCGGGCTGCC CTTGAGACCT TGTCCATTAT	4560
TGCCTACAAA CAGCCGATTA CGCGGATAGA AATTGATGCC ATCCGTGGAG TTAACGCGAG	4620
TGGAGCCTTG GCAAAGTTGC AGGCTTTTGA CCTGATAAAG GAAGACGGGA AAAAGGAAGT	4680
ATTGGGGGCG CCCAACCTCT ATGTGACTAC GGATTATTTT CTAGATTACA TGGGGATAAA	4740
CCATTTAGAA GAATTACCAG TGATTGATGA GCTTGAGATT CAAGCCCAAG AAAGCCAATT	4800
ATTTGGTGAA AGGATAGAAG AAGATGAGAA TCAATAAGTA TATTGCCAC GCAGGTGTGG	4860
CCAGTAGGAG AAAAGCAGAA GAGCTGATTA AGCAAGGCTT GGTGACGGTT AACGCCAAG	4920
TGGTGCGTGA ACTAGCAACC ACTATCAAGT CAGGCGACAA GGTGGAAGTT GAAGGTCAAC	4980
CTATCTACAA CGAAGAAAAG GTCTACTATC TGCTTAACAA ACCACGCGGT GTGATTTCCTA	5040
GTGTGACAGA TGATAAGGGT CGCAAGACGG TTGTGACCT CTTGCCCAAT GTCAAAGAGC	5100
GTATTTACCC TGTGGGTCGT TTGGACTGGG ATACATCAGG TGTCTTGATT TTGACCAATG	5160
ATGGGGACTT TACAGACGAG ATGATTCACC CTCGTAATGA GATTGACAAG GTTTATGTCG	5220
CGCGTGTTAA AGGTGTGGCC AATAAGGACA ATCTCCGCC CTTGACCCGT GGTCTTGAGA	5280
TTGATGGTAA GAAAACCAAG CCAGCTGTTT ATGAAATCTT CAAAGTGGAC CCAGTCAAAA	5340
ATCGCTCTGT GGTGCAGTTG ACCATCCATG AAGGGCGTAA CCATCAGGTT AAAAAGATGT	5400

1061

TTGAAGCTGT TGGTCTCCAA GTAGATAAGT TGTCTCGGAC TCGTTTCGGA CACCTAGACT	5460
TGACAGGACT CCGTCCAGGA GAATCCCGTC GTCTTAATAA AAAAGAAATC AGCCAACACTAC	5520
ACACCATGGC TGTAACCTAAG AAATAATGAA ACGAATTTTA ATAGCGCCTG TCGGCTTTTA	5580
CCAACGTTTT ATCTCACCAG TCTTTCCACC CTCTTGTCGC TTTGAGCTGA CTTGTTCCAA	5640
CTACATGATT CAGGCTATTG AAAAACATGG GTTTAAGGGG GTATTGATGG GCTTGGCTCG	5700
GATTTTACGT TGTCATCCCT GGTGCAAAAC AGGTAAGGAC CCCGTTCCAG ACCGCTTTTC	5760
CCTTAAACGA AATCAAGAAG GGAATGAGG TGGGGTAAAT AGATTTCAA ATGATAAAAA	5820
CGCATCCTAT CAGGTTTGAG TGAACCTGAT AGGATGCGTT TTAGAATGTC AAAATTTTAT	5880
ACTCTTCGAA AATCTCTTCA AACCAGCTCA GCTTTCATCT GCAACCTCAA AACAGTGTTT	5940
TGAGCAACCT GCGGCTAGTT TCCTAGTTTG CTCTTTGATT TTCATTGAGT ATTAAATTGA	6000
GTTTGAAGTG GCTTATTTCA AAGCTTTTGG TATGTCTTCA ATCATGAGTT TTGTTGATTC	6060
AAGTCCGCCT CCGCTTAGAT ACCAGAGGTC TGGTGTAGT TGGATAATCT TACCATTTTT	6120
AGCAGCAGGT GTTTCAGCGA TAAGGGCATT TTCTAGGACA CCGTCGTTGC TAGAGTTGTC	6180
CCCACCGATG GCAAGGGTAC GGTGATGAC AAAGAGGATG TCAGGGTTGA TTTCTTTGAC	6240
ACTTTCAAAG CTGACTTCTT GTCCGTGGCG TGAGTCTTCA AATTTTGTAT CAGTTGGTTT	6300
GAATTTCAAG GTTTGGTACA AGAAAGAGAA ACGAGATTG GCACCAAAG CTGCCATTTT	6360
TCCTTCATTA AGGAGGATCG CAAGGGCTTT TTTGTCAGAG CTTTCATTTT TAGTAGCGAC	6420
TTCTTGGATG CTCTTGCTTA GCTTGGTCAA TTCTTCCTTG GCTTTCTGTG TACCAGTTTC	6480
GCCGAAGGCA CTTGCTAAGG ATTCGATATT AGCCTTGGTA GAAGTCCACT AGTCGTCCTT	6540
GCTTGCTTGG AAGAGAACGG TTGGGGCGAT TTCTTTGAAT TTGTCTACGA ATTTTGTGT	6600
ACGTGGCGAA GCGATAATCA AATCAGGCTC AAGGGCGGCG ATAGCTTCTA AATCAGGTTC	6660
TTTCATAGAA CCAACATTTT TGACAGTTCC CACTAGGTCT TTTAGATAAG TCGGAACAGT	6720
TTTTGTAGGC ATTCGACGA TATTTTTTTC AAATCCTAAA GCGCGAATAG TATCCGCAGC	6780
GCCGAGGTCA AAGGTCACAA TCTTTTCAGG AACTTTGGAA AGTTTGACCT CGTCCAGTGA	6840
ACTTTTAATG GTTACCTCTG TTGGAGCAGA GCTACTGGTC TCTGTCTGAC TAGTGCTTGA	6900
GTTTGTACTA CATGCACCAA GTAGGAGCAA GAAGCTGGCC ACTAGGGCAG TGAAATAAAG	6960
TTTAAGGGAT GTTTTCATAA TTTCTCCTTT TTAATATGTG ATAACGATTT AGGGAGTCTC	7020
TTAATCTTAT TGACTAAGAG ACTGAAGGTT CTCTAACTTG AGCTTTTATG TTACTAGCTA	7080
TAGATACAGA TCTTTTGTG ATTGATATCA GCTAGCGTGA TGGGAATCTC ATAAAGTTGA	7140

1062

CTGAGCAGGT CAGCCTGCAT GATTTGATCG GTTCTTCCCT TGCTAAAGAC CTGGCCGTCC	7200
TTGAAGGCGA CAATTTCATC TGCATACTGA CTGGCCATGT TGATATCGTG GAGGACGATG	7260
ATAATGGTCT TGCCGAGTTC CTCCACCAGT CGTCGAAGAA TCTGCATCAT GCTGACGCTT	7320
TGCTTGATAT CGAGATTGTT GAGTGGITTCG TCCAGCAAGA TAAAGTCCGT ATCCTGGGCC	7380
AGTACCATAG CGATAAAGAC GCGCTGGAGT TGCCCCCTG ACAGGCTATT GATGTAGCGG	7440
TCTTTTAACT TGGTCAGTTC TAAATAGTTC AGAGTTTCTC GGATTTTTTC CCAGTCTTCT	7500
GATCTAAGTC GACCTCGGCT GTAGGGAAAA CGTCCAAAAC TGACCAGTTC TTCAACAGTC	7560
AATTTGCGTT GGTAAATGAT TTTCTGTTTT AGGATGGTTA GTTCTTGGGC CAGTTCTTGC	7620
GAATTCACG TCTCGATTTC ACGTCCTTTG ATACTGAGAA CTCCCTGATC TTTCTTGTTT	7680
AGCCTGCTCA TGATGGAGAG GAGAGTCGAT TTTCCAGCAC CATTTGAGCC AATAAAGGCT	7740
GTCAGTTTTT GAGGACTGAC TTCAAGCGAA ATGCCCTGCA AAATATCCTG TTTTGAATG	7800
GATTTGTCAA TGTTTCCAG TTTCACTGAC GAGACCTCCT ATATAGTAAG ATAAAGAATA	7860
AGAAGCCACC CACACTCTCA ATGATCATAC TGATACGAAT TTCCAGTGCA AAGACTCGTT	7920
CAATCAAGGC TTGCCCCAAG GTTAAGCTAA TAAATCCAAC CAGAAATGGCC ACTATAAAGA	7980
GTAAGTTGTG CTGATAGTCT TTGACAATCA GGTAGGTGAG GTTGGCCAGT ATAAAGCCGA	8040
AGAAGGCCAT AGGTCCTACC AAGGCAGTGG CCGTTGAGGT CAAAAGCACG ATTCCCAGCA	8100
GGAGCTCTTT CTGTTCTTTT TCAACATCGA GTCCCAATAT CTGAGCCGTT TCTCTTGCA	8160
GGTGCAAGAC ATCTAGAACG ACTGCTTTTC GAAAGAAAAA GATTGTCAA GCGAGGATGA	8220
TCAGAGAACC GATGGCTAGG ATGGAAGTGT TGAGATGTTG AAAGGAGGCA AAAAGACTAT	8280
TTTGAGTTT ATCGTATTCG TTTGGATCCA TTAGGACTTG AAGGAAGGTG CTGATATTTT	8340
GAAAGAGACT TCTGAGCGCT AGACAGATCA GCAGGACGAA GACCAGGTCT TGCTTCATCA	8400
GTGTCTTCAA GTAACCTTGT AAGGCGAGAA AGAAGAGGGA CTGGACAAGA AGTAAGACTA	8460
GGAATTCATA GATAGGGGAT TTGCCAAGTT GAAGAACTT GCTTTCAAAA ACCAGTAGTA	8520
GGGTTTGTAG TAGGACGTAG AAGGATTCAT TTCCCAAAAT ACTAGGCGTC AGGAAGCGAT	3580
TTTCCGTCAG GTTTGAAAA CTAATGGTCG AAATCCCAGT CGCGATGGCT ACCAAGAGAT	8640
AAACGATGAT CTTTGGGAA CGCAACTTCC AAGCAAAGGC TGACAAGTGA GTGATGGGCC	8700
AAAAGTAGAG AAGACAAGCT CCGATGGCAA GAATAATGAG AATCCAGAAG AGCTTGGTAT	8760
GTTTGCCTTT AGTCTGCATC TTTTCGTCCC CCTCTCCAGA GAAGTAGGAT AAAGACGAGA	8820
CTACCGATGA TTCCTAGCAA GAGACTGACA GACAACTCAT AGGGCCTAAT CAGAACTCGG	8880
GATAGGATAT CGCAAGCCAG AACTAGATTG GCACCAACCA GTGCGACCAT GAGTTTGTTT	8940

1063

TGACTTAGAT TATCTCCATA GCGCTTGCGA ACAAGATTGG GAACGATAAC TCCGAGAAAT	9000
GGTAGGCCAC CCACGGTAAT CATGGTGACG CTTGTCTGTTA GCGCCACCAG AAAGAGGGCC	9060
AGTTTTTCAA GTAGGGAGTA GGAAATCCCC AACTCTCGC TGGTTTCTTT CCCTAGATTG	9120
ATGATGGTGA AGGTTTGGGA TAATTTCCAA ACGGTTATCA GGATGATGAG GCCTAAGAAG	9180
AGCCACTCAT ACTGATGGGT CTGAATCATG GAGAAGGAGC CCTGGGTCCA GGCAGTCATA	9240
CTCTGAACCA GATTGAAACG ATAGGCGATA ACTTCTGTGA CTGAGCCGAT AATCCCGCTA	9300
TAGATGATCC CAATCAGAGG CAACATCCAC CTTTCCTTTA CAGTAAAAAT GGCATAAAG	9360
GCTAGGAAGA AGAGGGTGAA TACGATGGAT GAAACAAAAG CGAAGAGCAT CTTGTGGGTC	9420
AGACTAGCCG ATGGAAGAC AAAAAGGCTC AGCACCATTG CCAGTTTGGC GGCTTCAGTC	9480
GTTCCTCACTG TACTCGGTGC AGCAACTGA TTTTGGGTAA TAGTCTGCAT GAGAAGGCCT	9540
GCCATACTCA TACTAGAGGC AGTCAGGAGA ATACTGATAG TTCTTGGGAG ACGGGACTCT	9600
TGAAAGAGGA GCCAGGTCTG CTGGTCGAAA TCAAATAGCT TTCCCATGA AAAATCACTG	9660
GTCCCAATGC TAATAGAGAG AAAGACTAGG AGTAGAAGTA AGCCAGG	9707

(2) INFORMATION FOR SEQ ID NO: 165:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 5910 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

CCGCAATTAT GCTTGAAAAG GAGTATACTT ATAAGTAACG CAAACGTTTG CGTCTGAAAA	60
ATACGCAACG TTCCATTATT TTAACACACG AGGTGCTATT ATGAAAAAAC GTCAAAGTGG	120
TGTGTTGATG CACATCTCTT CTCTCCAGG AGCTTACGGA ATCGGATCAT TTGGTCAAAG	180
TGCTTACGAC TTCGTTGATT TCTTGGTCCG TACAAAACAA CGTTACTGGC AAATCCTTCC	240
ATTAGGAGCA ACTAGTTACG GGGATTCTCC TTACCAATCT TTCTCAGCCT TCGCAGGAAA	300
CACTCATTTT ATCGATTTAG ATATCTTGGT GGAGCAAGGT TTGTTGGAAG CAAGTGACCT	360
TGAAGGAGTT GACTTTGGTA GCGATGCGTC TGAAGTTGAC TATGCTAAAA TCTACTATGC	420
ACGTCGTCCT CTTTGTAGAA AAGCGGTGAA ACGTTTCTTT GAAGTCGGAG ATGTTAAAGA	480
TTTGTAGAAA TTTGCTCAAG ACAACCAATC ATGGCTTGAG CTCTTTGCTG AGTATATGGC	540
TATCAAAGAG TATTTTGACA ATCTTGCTTG GACTGAATGG CCAGATGCAG ATGCTCGTGC	600

1064

TCGTAAAGCT TCAGCACTTG AAAGCTATCG TGAGCAATTG GCAGACAAGT TGGTTTACCA	660
CCGTGTGACT CAATACTTCT TCTTCCAACA ATGGTTGAAA TTGAAAGCTT ACGCTAACGA	720
CAACCACATC GAAATCGTTG GGGACATGCC AATCTACGTA GCGGAAGATT CAAGTGATAT	780
GTGGGCAAAT CCACATCTCT TCAAAACAGA TGTCAATGGT AAGGCTACTT GTATCGCAGG	840
ATGCCCACCA GATGAGTTT CTGTAAGTGG TCAGCTTTGG GGTAAATCAA TCTATGACTG	900
GGAAGCAATG GACAAAGACG GCTACAAATG GTGGATTGAA CGCTTGCGTG AAAGCTTCAA	960
AATCTACGAT ATCGTTCGTA TCGACCACTT CCGTGGCTTC GAATCTTACT GGGAAATCCC	1020
TGCTGGTTCC GATACAGCAG CACCTGGTGA GTGGGTGAAA GGTCAGGTT ACAAGCTTTT	1080
TGCAGCCGTT AAGGAAGAAC TTGGTGAGCT AAACATCATC GCAGAAGACC TTGGCTTCAT	1140
GACAGATGAA GTGATCGAAT TCGGTGAACG TACTGGCTTC CCAGGAATGA AGATTCTTCA	1200
ATTTGCCTTC AATCCAGAAG ACGAAAGCAT TGATAGCCCA CACTTGGCAC CTGCTAACTC	1260
AGTTATGTAC ACAGGAACAC ACGATAACAA TACGGTTCTT GGTGGTGACC GTAATGAGAT	1320
TGATGATGCG ACTCGTGAGT ACATGGCTCG TTACACGAAC CGTAAAGAAT ACGAAACAGT	1380
GGTACACGCT ATGCTTCGTA CAGTATTTTC ATCAGTTAGC TTTATGGCAA TTGCAACTAT	1440
GCAAGATTTA CTAGAATTGG ATGAGGCAGC TCGTATGAAC TTCCCATCTA CCCTTGGTGG	1500
AAACTGGTCT TGGCGTATGA CTGAAGATCA ATTGACACCA GCTGTCGAGG AAGGTTTGCT	1560
TGACTTGACA ACAATTTATC GCCGAATTAA TGAAAATTTG GTAGATTAA AGAAATAAGA	1620
CAATAATCAG GAGACAACTA AACATGTTAT CACTACAAGA ATTTGTACAA AATCGTTACA	1680
ATAAAACCAT TGCAGAATGT AGCAATGAAG AGCTTTACCT TGCTCTTCTT AACTACAGCA	1740
AGCTTGCAAG CAGCCAAAAA CCAGTCAACA CTGGTAAGAA AAAAGTTTAC TACATCTCAG	1800
CTGAGTTCTT GATTGGTAAA CTCTTGTCAA ACAACTTGAT TAACCTTGGT CTTTACGACG	1860
ATGTTAAAAA AGAACTTGCA GCTGCAGGTA AAGACTTGAT CGAAGTTGAA GAAGTTGAAT	1920
TGGAACCATC TCTTGTAAT GGTGGTTTGG GACGTTTGGC TGCCTGCTTT ATCGACTCAA	1980
TTGCTACTCT TGGTTTGAAT GGTGACGGTG TTGGTCTTAA CTACCACTTT GGTCTTTTCC	2040
AACAAGTTCT TAAAAACAAC CAACAAGAAA CAATTCCAAA TGCATGGTTG ACAGAGCAAA	2100
ACTGGTTGGT TCGCTCAAGC CGTAGCTACC AAGTACCATT TGCAGACTTT ACTTTGACAT	2160
CAACTCTTTA CGATATTGAT GTTACTGGTT ATGAAACAGC GACTAAAAAC CGCTTGCGTT	2220
TGTTTGACTT GGATTCAGTT GATTCTTCTA TTATTAAAGA TGGTATCAAC TTTGACAAGA	2280
CAGATATCGC TCGCAACTTA ACTCTCTTCC TTTACCCAGA TGATAGTGAC CGTCAAGGTG	2340
AATTGCTCCG TATCTTCCAA CAATACTTCA TGGTTTCAAA CGGTGCGCAA TTGATCATCG	2400

1065

ACGAAGCAAT CGAAAAAGGA AGCAACTTGC ATGACCTTGC TGA CTACGCA GTTGTC AAA	2460
TCAACGATAC TCACCCATCA ATGGTGATTC CTGAATTGAT TCGTCTTTTG ACTGCACGTG	2520
GTATCGATCT TGACGAAGCA ATCTCAATTG TTCGTAGCAT GACTGCCTAC ACTAACCACA	2580
CAATCCTTGC TGAAGCGCTT GAAAAATGGC CTCCTGAATT CTGCAAGAA GTGGTTCCTC	2640
ACTTGGTACC AATCATCGAA GAATTGGACC GTCGTGTGAA GGCAGAGTAC AAAGATCCAG	2700
CTGTTCAAAT CATCGATGAG AGCGGACGTG TTCACATGGC TCACATGGAT ATCCACTACG	2760
GATACAGTGT TAACGGGGTT GCAGCACTCC ATACTGAAAT CTTGAAAAAT TCTGAGTTGA	2820
AAGCCTTCTA CGACCTTTAC CCAGAAAAGT TCAACAACAA AACAAACGGT ATCACTTTCC	2880
GTCGTTGGCT TATGCATGCT AACCCAAGAT TGTCTCACTA CTTGGATGAG ATTCTTGGAG	2940
ATGGTTGGCA CCATGAAGCA GATGAGCTTG AAAA ACTTTT GTCTTATGAA GACAAAGCAG	3000
TTGTCAAAGA AAAATTGGAA AGCATCAAGG CTCACAACAA ACGTAAATTG GCTCGTCACT	3060
TGAAAGAACA CCAAGGTGTG GAAATCAATC CAAATTCTAT CTTTGATATC CAAATCAAAC	3120
GTCTTCACGA GTACAAACGC CAACAAATGA ACGCTTTGTA CGTGATCCAC AAATACCTTG	3180
ACATCAAAGC TGGTAACATC CCTGCTCGTC CAATCACAAT CTTCTTTGGT GGTAAAGCAG	3240
CTCCAGCCTA CACAATCGCT CAAGACATTA TCCATTTAAT CCTTTGCATG TCAGAAGTTA	3300
TTGCTAACGA TCCAGCAGTA GCTCCACACT TGCAAGTAGT TATGGTTGAA AACTACAACG	3360
TTACTGCAGC AAGTTTCCTT ATCCCAGCAT GTGATATCTC AGAACAAATC TCACTTGCTT	3420
CTAAGAAGC TTCAGTACT GGTAAATGA AATTCATGTT GAACGGAGCT TTGACACTTG	3480
GTACTATGGA CGGTGCTAAC GTGAAATCG CTGAGTTGGT TGGAGAAGAA AACATCTACA	3540
TCTTCGGTGA AGATT CAGAA ACTGTTATCG ACCTTTACGC AAAAGCAGCT TACAAATCAA	3600
GCGAATTCTA CGCTCGTGAA GCTATCAAAC CATGGTTGA CTTCAATCGTT AGTGATGCAG	3660
TTCTTG CAGC TGGAAACAAA GAGCGCTTGG AACGTTTTTA CAATGAATTG ATCAACAAAG	3720
ACTGGTTCAT GACTCTTCTT GATTTGGAAG ACTACATCAA AGTCAAAGAG CAAATGCTTG	3780
CTGACTACGA AGACCGTGAC GCATGGTTGG ATAAAGTCAT CGTTAACATT TCTAAAGCAG	3840
GATCTTCTC ATCTGACCGT ACAATCGCTC AGTATAACGA AGACATCTGG CACTTGA ACT	3900
AATACTCTTC GAAAATCTCT TCAAACCACG TCAGCTTTAT CTGCAACCTC AAAGCAGTGC	3960
TTTGAGCAAC TGCGGCTAGC TTCCTAGTTT GCTCTTTGAT TTTCAATTGAG TATAAGATAC	4020
AAATTTATAC TAATACATTT TGTA AAAAG CGAGTTTCGA TTGAAATTCG CTTTTTTAAT	4080
GATGTAGATT TGGGTCAATC TTGTCTAAAA ATAGGGAAAT CCTAGATACA GTGAAGGCTT	4140

1066

TAAATGCTGG TTTTACTGT CCTCAGCCTT ATATTTTTC GTAGTTGGTT ACCTCATATC	4200
TATTATATTC GCTTACATAA AGTATTATAA TATAATTGTA GGAAAGAAG TCTTTTATG	4260
ATATACACAC TTAAATGGT GTTGTATT ACCTTCTTG TAATAAGCTT GTTACCTGAT	4320
AAGATTTTGG GAAAAATAA AAAAATTGG AAAATAGTTT TTGCAATAT GACGGCAGTG	4380
GCAGCATTGT CATTTATGTA CTAAGTTATT TTAAGAATGT AGGCAATAA ACCCTACATT	4440
CTTTTAGT TTTTCTGTT TCTAAATTCT ATTTATCCAA GCGATTCAAC ATTTCTTGCT	4500
TCTTCGCTTC AAGTTCTGCA CGCTTTCTT CGATTTCGGC ATGTTTTC TCGAGTTCAG	4560
AACAACTTGC ACCATTGCTA AATTCTTTC GCCATCAGGA GATAGGGTGA GTCGACATGT	4620
CTATTACTCA CCCAAAGCAG TCCTACAAAG CAGGAATTT CTGTTACTTT TTTGGAAATA	4680
GTAACGTTTA TACAGCTTTG ACACTTCGTA TCAAAGCGCC AAACACACTC CGAGGGGTTT	4740
ACAGAAAGCA GAAAAGGAAT GATCTGGTAT AAGATCATTC CTTTTCyCTC TTTTCTTTA	4800
AGTAATTATA TACAATGTAC GACGAAGTCG TCATTGCAAT GCTGATCCAC CACCTAAAGG	4860
GAACTTTAAA CAACATTGAT AAGATAAAGA ATATAACAA CGAAAATACG TTATACCCAA	4920
TTAATTTTAT TGTATATCTC ATGATTAAAA GTTAATCCTT CCGTTGTTAG GAATGGCATC	4980
ATTTTATCC CATAATTGTG CTAAATAAGT CCCCCTGAT AATAAATTCA TAGCGAATTC	5040
TAAAGCAACA TCATTTACAA ACCAACTACC TAGATATCTA GAAATTGCTG AACGAATAGC	5100
ACTTTTGTCT GCATGTTTC CTTTACTTT AATTAGATTT GCAAGGCCTG CACTAGTTCC	5160
TCCTAATGCT AAAGCTATTG CAGTATCTAA TAGAGCACCC ATTTGATTAA CTGTAATACC	5220
TTGCCAAACT GCTCTAAATG GAGAGTATGT AGGTGGGATT GTATAATCGC CTGTAATTG	5280
TCGGTTAATT ACTTCTTGA TCCATTGTTG TGAGACGTCT GGATGAAAAG ATTGGATTTT	5340
GTTTGCAAGT GTATTGATTT GTTCTTCTGT TAGAGAAGTG ACAGGTTGAA GTTCCATATT	5400
TGTTTCAATT TGIGATACTT GTTCAGAAGC GTATACAGCT GAAACACTTG GAATCGCTGA	5460
TACAATTAAC ACAATTGACG TCAAAAAAAC CGAAATAAAT TTCATTAATT TGTTCATGAG	5520
CTTTCTCCT TTTTATTTGC ATCTGCTTAC ATTTTATCAT ATACTGTTAT TATAGTCAAA	5580
AAAATATGCT ATTATGTTAA AAAAATATTT TTCAAAATAT AAATGGACGG ATTTATTTTG	5640
GATTTATTT GTTATTTTGA CCTGCCTCTA TATTGGTAAC CATGATTTGT TTACTCTCAA	5700
TCATCAAGAA TTCTCTTTTC GTGGTAGCGT TTGGGGTCTG GTACTGGCCT TATATCACTT	5760
ACTATTCATT GATAAGTTTG TTATATCGAA TCGAAAATAA AGATTAGAGC TATGCTTGAC	5820
TGTGTACTTT TAGGATTTAT TTTGGAGGAA GATTTTGTCT CTATTTATTTA TTATTTTAAA	5880
TTTATTTATT TTGTATAAGA TCTATTCTTT	5910

1067

(2) INFORMATION FOR SEQ ID NO: 166:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 5406 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

```

GGCATAGCGA CTCATTTTTT CAACTGTCCA GGCTGGATAC CAGACTAATT TAACCTCAGT      60
ATCCGTTACT TCTGGAACCT CTATCATAGC ATCATAAATC TGGTCTGTCA AAAGGTCTGC      120
TAAGGGACAA CCCATAGTGT TCAAAGTCAT GTCAATCTCT GTTTGCCCTG TGTACCCGTC      180
AAAACGAATC TCATAGATCA AACCAAGATT GACAATATCG ATTCCCAACT CAGGGTCGAT      240
GACTTCTTCC AAGGCTGTTA AAATCCGTGT TTTGATGTTT TCAATTTGCT CTTCTGTATA      300
AGCCATATTT TCCTCACTCT TAGTCTTCAA TAAATCACG AAGCGGTTTG CTACGACTTG      360
GTTGGCGTAG TTTTCTCAA GCCTTTGCTT CAATCTGACG GATACGCTCA CGAGTTACGT      420
TAAAGACTTT CCCACATCT TCAAGTGTGC GCATTTTTC ATCATCTAGT CCAAACGTA      480
GACGCGAAGC ATTTTCTTCA CGGTCTGTAA GAGTATCTAA GATTTCATCC AATTGCTCAC      540
GCAAGACGAT ACGAGTCGTA TAATCCACTG GATTTTCAAT CACTTCATCT TCGATAAAGT      600
CTCCAAGGTG GCTATCGTCC TCTTCACCGA TAGGAGTTTC AAGAGATACT GGTTCCTTGGG      660
CAATCTTCAA GATTTCACGA ACCTTATCAG GTGTCATATC CATTCGTTCA GCAATCTGTT      720
CTGGTGTCCG ATCTTGCCCC AATTCTTGAA GGAGATTCCG CTGTTACGA ACCAATTAT      780
TGATAGTTTC AACCATGTGA ACTGGGATAC GGATGGTACG AGCTTGGTCC GCAATAGCAC      840
GAGTGATAGC CTGACGAATC CACCAAGTTG CATAAGTTGA AAAGTTGAAC CCTTTAGAAT      900
AGTCAAACCT GTCAACCGCC TTCATCAAGC CCATATTTCC TTCTTGAATC AAGTCAAGGA      960
ACTGCATACC ACGACCGACA TAGCGTTTGG CAATGGAAAC AACCAAACGA AGATTGGCTT      1020
CCGCAAGACG TTGTTTGGCT TCGATATCAC CAGCTTCAAC AGCCAGTGCC AACTCTTTCT      1080
CCTCTTCATT GGTCAAGAGA GGAACGACCC CTATTTCTTT CAAGTACATA CGGACAGGGT      1140
CATTGACCTT AGCAGAAGTT GACCCAATCA AGTCCTCATC GCTGAGTTCT GGTTCCTTCT      1200
CATTGCTGAG AACACGCGCA CTTGGATTTC CTTCTTATC TGTGATAGAA ATGCCTGCAT      1260
CCTGAATCCG TTGCAAGAGA TCTTCAATCC CATCAGCGTC CAAGGTAAAA GGAATAACCA      1320
GACTTGCAAT GATTTCATCA TCTGTTGCTG TCCCTTTTGG CTTATGATTA CGGATAAATT      1380

```

1068

CTGCTACCTG TACGTCAAAT GTTGTTACTT CTTTTTGTTT TGTGCCATT ATTACTCCAT	1440
TCTTCTCTTT TGGGAAATTA AACGTTCCAA TTCTTCTAGG GCTGTATCTG TATCTCCTAC	1500
ATGGCTAGCT TCCTGCACCT TCTTTTIGAT TCTCATATTG TCCTGATTCA AGAGAGCCTT	1560
GTTTCGAGTC ATCTCTACTT CACTAAGTTC CTGCGGCGAT ATCTCAGCAG GCAAATCCTG	1620
AGCTAAACT TGGTACCAAG CTCTTTCAAC TTCCTCTGTC TGCTCTGCTA AACTTCTGG	1680
AGGAAGATTT CCATACTGGC CAAGCAAGTC ATATAAGACC TGAAATTCAG GTGTAGCAAA	1740
TGCAAAGTCT TCTCGCAAAC GGTAATCGTT CAAAACAAGA GGGGATTCCA TCATCCGATA	1800
GAGTAGATGG GCTTCTGCCC TCATAATAGC CGATAACTGC TTGGTGACAG GCATGGTGAT	1860
TGGCGTCGGT CTGGAAATTC CTTCCATGCG ATTCTGCCCTT TGCACCTGAC GACTCTCATT	1920
AACAATCTGC TCAATCTGGG TATAATCAAA GGACGCCAGA CTGTCAGCTA AAATATGAAT	1980
ATAGCTGTTT TGAGCAGCGA TGGACTTTTC TTGAACAATC AAGGGAGCTA TTTTTCAAG	2040
AAACTCAATC TGAGCCTGCA GATTTTCACT GTTTTCAGGT TTGTACTGAT GAATGTAGAA	2100
CTCAATCGGA CTAATACGAG TTTTCGTTAA TAGATAGGCC AAGTCTTCTG GACCATTTTT	2160
TTGTAGATAC TCATCAGGAT CCAAGTATC AGGCATGCTG ACGATTTGCA CAGGCATATC	2220
ACCAATTTCA TCCAATGCTT TCAATGTGCG GGCTTGCCCA GCCTTATCTC CATCGTAAAC	2280
AAGAACCAAT TTCTTGGTTA ACCTTTTCAG ATGCTCAACA TGCTCTCGAC TCAAGGCTGT	2340
TCCCATCGAC GCCACAGCAT TTTCGATTCC AGCCCGATAG GCTGCAATAA CATCCATGAA	2400
TCCTTCCATC AGGTAAATCT CACTAGCTTT TCCAGAAGAT CTTTTTGCCC TATCCATATG	2460
ATATAATTCG TAACTTTTGT TAAAAATTGC AGTCGATCGG CTGTTTTTAT ACTTAGAAGT	2520
TTGTGAATCC GTTTTTTGCC AGATACGACC TGAGAAGGCA ATGACCTTTC CTTGGTCATT	2580
TGTCAGGGGA AACATAATGC GATTGTGAAA GGTGTCTACA AATTGATTGG CATCCGAGAG	2640
ATAAACAGG CCTGAATCCA GTAAATCCTC TTCACGATAC TGATCAGACA AACGTTGATA	2700
GAGATAGTTT CGTTCTGGAG GTGCTAAACC AATCCAAAAA TGTTTAAGCA CTTCACTCTGT	2760
CAACCCCGC TGATAAAGGT AATTTCTGGC CTCTTCGCCC ATAGTCGTTG TCATGAGAAT	2820
AGCATGGTAA AATTGGCTG CATCTTCGTG CATATCATAA AGAGCTTGGT GAGGTGAGCC	2880
TGACTTCTGC TCACTATAAA GCGGTTTTTC AACCTCAATT CCAACACGCT GACCTAAGAT	2940
TTGGACTGCT TCTATAAAGG GAACCCCTTG GTACTCCTCG ATGAACTTAA AGACATCACC	3000
TGAGCGACCA CAACCGAAAC AGTGATAAAA CTGCTTGTC TCTACAACAT TGAAAGATGG	3060
TGTTTTTTCA CCATGAAAAG GACAGAGCCC TAGATAGTTC CGTCCTGCCT TTTGTAAAGA	3120
AATCACATCT CCTATGACTT CCACAATGTT GGCATTGTTT TTGATTTCTT CAATGACTTG	3180

1069

TTTGTCAACC ATACACAATA CCTCCATGTT ATCATAGTTT ACTTTATATA GTATACTTTA	3240
TTTCAGAAAA AAAGTAAACC ATTCACTCA TTTCCCTAC TTTATTCAAA GAGTTGATAA	3300
TAATCAGAGA TTTTCATTTT TGCTTTTCT TCTTGGTTA AATCTTGAT AATTCGTCCT	3360
TCTTTCATGA CAATCAAGCG ATTGCCGTAT TTGAGAGCAT CTTCCATATG ATGAGTAATC	3420
ATAAGGCTG TTAGCTGATC TTTCTTAACA AATTCATCTG TCAATTCCAT CAAAGCAACA	3480
CTAGTCTTTG GATCCAGGGC AGCAGTATGC TCATCTAACA GGAGTAATC AGGTCGCTTC	3540
AAGGTGCCA TCAAGAGACT CAAAGCCTGT CTTTGTCCAC CTGATAAGAA CTCAATCGGT	3600
GTATTCAGT GTTCTCAAG ACCAITTCTT ACTTTTCAA TGGTTGCCTG AAATTCATCC	3660
TTATAGCTAG TCAAGCGTCG TGGTAACAAT CCACGCTTTT CACCACGAAA CTGGCGATT	3720
AAAAGATTTT CAGCGACCGT CATACGGGGA GCTGTCCCA TCTTTGGATC TTGGAAGACA	3780
CGAGACAGGT ACTTGGCAGC CTTCTCGGT GAAAACCTAG TGAGATCTC ACCTAAAATA	3840
CGGATAGTTC CACTAGTTAG TGATAAGTC CCTGCTATAG TGTAAAGAG AGTTGATTTT	3900
CCAGACCAT TTCCGCCAA AATCGTGATA AAGTCCGTT CAAAAATTC TAAGGAAACA	3960
TCATTTAAAA TAATCTTTC TTCATCAAAG CCATTTTAA CGATTTTGGT TGCATTTTTT	4020
AATCTACAA TTGCTGTCAT TTGCTTAACT TGGCTCCTT CAAGATTGTT TGCTTAAATG	4080
TTGGAATCAT GAGGCAGACT GCTAAATCA AGGCACGTGA TAAACGAAG TAACTTGAT	4140
TAAAGCCAAG TGCATAACT GCCCACACTA AAAATTGATA AGCGATAGAA CCTACAACGA	4200
TAGTAACCAA ACGCTCTGCC AAGCTCAAAC TCTTGAAAT AACTTCTCCA ATAATCAAAC	4260
TTGCAAGCCC CACAACGATA ACCCCGATCC CTCGAGACAC ATCGGCATAA CCTTCTTGCT	4320
GAGCAATGAG GGCACCTGCA AGGCAATCA CACCATTGTA TAAGACCAAG CCCATGAGCT	4380
CCATGCGTCC AGTATGAATC CCGAACTTC TAGCCATATC AGGATTATCC CCTGTAGCAA	4440
TATAGGCTTG TCCGAGTTA GTGTCCAAGA AAAAGAGCAT GAGAGCAATA ACAATACTCA	4500
CAAAGATGAG ACCTGTCAAG AGTTGATTCA AATCCGAATC AAAAGGCAA ACATCCTGAA	4560
TTTGCTTGGT TCCAAGCAGG CCTAAATTCG CACGTCCCAT AATCAAGAGC ATGATTGAGT	4620
GACAAGAAGT CATCACAAA ATCCCTGAGA GCAAGGTTGG GATCTTCCCT TTTGTATAAA	4680
GAAGGCCTGC TGCCATTCCA GCCAAACAAC CTGCTCCTAC AGCAACAAGT GTCGCTAAAA	4740
ATGGGTTTAC GCCTTTGGTT ATCAAAGTGA CAGCAACAGC TCCCCAAGA GGAAGGAAC	4800
CTTCTGTCGT CATATCTGGA AAGTTTAAAA TCCTAAATGT CATAAAGATT CCCAGACCTA	4860
GAATAGCCCA GACAAATCCT TGAGAAATAA TGGAAACAAT CATATTTTAT TTAATCCTTT	4920

1070

CTATATTCAT CTTTTTAAAA AATGGGAAGA GTCTCCTCCT CCCTACCTTA TTTATTCGAT	4980
GACTTGTCCT GCTTCTTTGA GAACAGACTC AGGAATAGTA ATACCTAGTT CTTGTGCTAT	5040
TTTTTTATTG ATGACTGACT TACCAGTTGA AAAGACATTG ACTGGGGTAT CGGCTGGTTT	5100
TGCACCTTC AAGACTTGCA CAATCATTTT ACCTGTTGCC ACACCAAGGT CATGTTGGTC	5160
AATTACAAC GATGCCAAAC CACCTACTTC TACCATAGCT GTCGCACTGG GATAAATTGG	5220
TTTCTTAGAA CTTTGATTGC TAGAGACAAC CGTTGGAAT CCTGATGCAA TGGTGTATC	5280
AATTGGAACC CAAATAGCAT CTACCTTGCT AGTCATAACA GTGACAGTTG AGGCAATTTT	5340
ATTTGTTGAA GGAACGCAA ATGTTTCCAC TGTCAGACCT GCCTTTTCAG CATAAGCCTT	5400
AAATTC	5406

(2) INFORMATION FOR SEQ ID NO: 167:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9711 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

CAGCTTGCTC TTA CTATTAT AGCAGATGTT ATAGCTGGAA TTATCTTGTA TTTCGTCTGC	60
AAATGGCTAG ATGGTAAGAA GTAGACCGAA TGACTAGCCT ATAAACACCC GTTAAATCGC	120
TAAGATACGT CAAAAAGCC CTTAACTATG GCACTAGTTA GGGGCTTTGG TGTTC TAATG	180
AACCTTATAC ACTAACTACA TTCTAGCATA TAAGCCCAGA TATTCAAGA GTTTTATTTA	240
TTGTTTAAAG TTCTGAAAGG TCTATAATGA AGTTAGCCAT CTAGTATCAA AAAACCGACT	300
AGCTCTTATG AACTAGTCGA TTTCTCATCA ATGCGCCAAC ATTTCTTGGG CGATTCTTG	360
GCCAGATAGG TTATCTGGGT AGTAGGTTGG CCAGTTGTCC ATTTCTTCAA AGAGGGCTTC	420
TTGGCTTG TG CCTCCAAAGA AGATATGGAA ATGTTCTGCC TTA ACTGGGG CAACATTG	480
GTC ACTAAAC TGAACATACT TGAATTGTCC AGCGTCAGCA TCTGTGGCTT CAAAGAGGAA	540
ACGCACGCCA CGATTGCCCTT TCTTGTAAGT CAAAATTTTC TTACCGACAT ACTTGTAAGT	600
GTATTTCTTG CTTTGTCAC CTTGAACAAA TTCCATAGTA TTATCAGTAA TGTTAATCTT	660
AGTCACATCT GTATGATAGC CTTTGTGATA GTAAGCCTTG TACTCAGCCT GGGTCATCTT	720
ACCAGTCAAC TTAGCCTTGT AGTCAAAGAC TTGGTCAAAC GTGCCGTCTT CAAGGAAAGG	780
ATAA ACTGAT TGCCAGTTAC CTGCATAGTC ACTCAAGGTG CGGTCCTTGA CAGCTGCATC	840
CTCGAAGTAA CCATTTTGGA CTGTCTTGGT ATCCTCTGCC TTTTCAGGTT CAATTGCTGG	900

1071

GCCTTCTTGG TCTGTTGTTT GTTTCAAAGC CTGAGGTTT TTCTCCATCA CGGAAATGTA	960
GTTTTCTCCA GCCTTGGTGT CCTCTTCTGT CAGACTTTCT AAAGGATTGA GGACATCAGT	1020
TTTGACACCT GCTTCTTTTG AAAGTGTGTT AGCAAGGGCT TGTGAGGCAT TTCTTCAAAA	1080
TAGATATAGG CGATTTTATT TTTCTTGACA TACTCTGTCA ATTCTGCCAA GCGAGCAGCT	1140
GATGGCTCTG CATCTGGAGA AAGTCCTGAG ATTGCGACTT GTTTGAGTCC ATAGTCCAAG	1200
GCAAGATAGT TAAAGGCTGC GTGTTGAGTC ACAAAGCTCT TTTGTTTTGC TTGAGACAAA	1260
CCTTCTGCGT AAGCCTTATC CAAGCCTTGC AATTTTTCGA TATAGGCAGC TGCATTCTTC	1320
TCAAAGGTCT CTTTTTATC AGGATAATCT GCTGACAAGC TGTCGCGGAT GTGCTCTACT	1380
AGTTTAATGG CACGAACTGG TGATAACCAA ACATGGGGGT CAAACTCATG GTGATGACCT	1440
TCTTCTCCAT GGTGATGGTC TCCCTCTTCT TCCTCGCCAC CTGGCAAGAG CAACATATCG	1500
CCTGTGCGCT TGATGGTTTT CACTTTTTTC TTATCCAAGG TATCTAGCAA TTTAGGTACC	1560
CATGTTTCCA TGTTTTCATT TTCATAAAGC AAGGTATCTG CATCTTGGAT TTTGGCAACT	1620
GCCTTGGCAG ATGGTTCGTA TTCATGAGGT TCTGTCCCAG CACCGATTAG GAGTTCTACA	1680
TTAGCCGTAT CTCCTGCGAC TTGCTTGGTA AATTCATAGA CAGGGTAAAA GGTGTGCACG	1740
ATATTGAGTT TACCATCTGC CTGTTTTTGA TTGGAACAAG CCACTAAAAA CAAGGCACAT	1800
AGACTGGCTA GTAATAAGCT AATTTTTTTC ACGTTCGTCT CCTATTTGAT AAAACGTCTT	1860
ACTAAACTGA TTAGTATAAA GACAGTTACA AAAATAATGG TAATACTTGC ACTTGCAGGT	1920
GTTTCTGCAT AGTAGGAAAT GTAAAGTCCT GCTACCATT CCAAAAAGCC AATCGCACTG	1980
GCAAGCAGCA TAACCGATTT AAAGTTTTTC CCCAGACGCA GGGCAATACT AGCTGGCAAG	2040
ACCATAATGG TCGATACCAG AAGAGCTCCT GCTGCAGGAA TCATAAGGGC AATAGCCACC	2100
CCTGTACCA TGTTAAAAAG AATGGACATG GTACGAAC TGCAAGCCATC CACAAAGGCC	2160
GTATCTTCGT CAAAAGTTAA GATATACATA GGACGAAGAA AGAGAAAGCT CAAAATCAAA	2220
ACAACCGCCG CAATGACAAA GAGGGAAATG ACCTGTTCTT CACTGATAGT CACGATCGAA	2280
CCAAAGAGAT ATTGGTCCAA ACTCATTGAA CTCGAGCTTT TACCCTTGCT CATGACAATC	2340
AGAGAAACAG CCAGACCTGT TGACATGAGG ATAGCTGTCC CGATTTCAT AAAGCTCTTG	2400
TAAACCGTAC GGAGATACTC CAGAAAGACC GCCGCAATCA AGACAATGGC AATAGTAGAA	2460
ACAGTTGGAG AAATCCCCAA AACCAGACCA AAGGCTACAC CTGAAAGTGA GACGTGGCTA	2520
AGGGTATCAC TCATCAAAC CTGACGACGC AAGATGAGGA AGGTTCCCAA TACCGGTGAG	2580
AAAAGACTCA TAGCAATAAC CGCCAAAAAG GCGCGTTGTA TAAAGTCGTA AGATAATAAA	2640

1072

CTAAGCATGG CCCACCTCCT GGCCATTCTC ATGAACATTG AAACAACGCC ATGGCGAGTC	2700
TTGGTTACGG ACTAGATGAA TATTGCGATC CGCATAATCC TTAAGTTCTT CAGGGTCATG	2760
GGTAATCATC AAAACAGCCT TGCCATGATG ATGGGCGCTG TGGTGCATGA GTTCGTAAAA	2820
TTCATTTTTA CTTCCTGCAT CCATCCCCGT TGTGGGCTCG TCTAGGATAA ACACATCAGG	2880
GTCAGAAGCA AACATACGCG CAATTACCGC TCGCTGCTTT TGTCCCCCAG ATAGAGACCC	2940
CAAGCGTTTG TCTCGATGTT CCCACATGCC AACTGAGTCC AGACTAGCCT TGATATGCTC	3000
CTCATCATGA GCATTCAAAC GACGGAACCA GCCTTTTCTC GGATAGCGAC CCGACTTGAC	3060
AAATTCATAG ACCGTACTTG GAAAACGAGC ATTAAACTG GCAATTTGTT GAGGAAGATA	3120
GGCTATTCTC AATTCTTAC CTTGCGTATT TGTCTTTGAA ATAGCCACCT TTCCAATGCG	3180
TGGTTCGAGA ATTCCAAGAC TAGCCTTGAT GAGCGTCGTC TTAGCCGCTC CATTTTCCCC	3240
AGTCAAGGTA ACAAATTCCT CACTATCAAC ACAATAATTG ATATGTTCAA GAACAGGCTC	3300
CTTATCATAA TAGAAGGACA AATCCTCTAC CGTAATATAT CTCATTATTT GATTTCTCCT	3360
ACTAAAGCAG TCAAAAACCG CTGAATCACT TTTTGTTTAT TTGGAGTAAA CTGAGTCGCC	3420
ACTTGTTTAT AGGTTAAAAG TGTATGCTCA TGGTGATGGT GGTGCTCCTC AGCGATTGGA	3480
CGAGCCAAAT CAGTCAACTG ATAAAAATC ACACGCGCAT CTTTAGAATC TTTAGATGTT	3540
TCCAACATCC CTTCCTTGAC CAAAGACTTA ATGGCCTTGG TAACTGCCGC CTGACTGACA	3600
TTGAGACGAC GGGCCAATTC TGAATTTGTT AAAGATTCCCT CTGACAAGAG CATAAGGATA	3660
TGCTCCTGAG TATTGGTCAG GGCCACCTCG CTAGTGCAAT GACCTATTAG GATTTTATGC	3720
TGATTTTCCG CCTGCAAAAT CACCTCATTC AAAAAAGCAT TGATATCCTT TGCTAGCTGT	3780
CTCATATCTG ACTCCTTTCC TTTTAGACTT CTCTTTTTTA AGAGAAAAAT ACTATTCTTT	3840
GACATTTTGT TTACCAGTTA ATTATATCAC AAGCAAAAAA AGAGTCAAGA AAAAACGTGA	3900
AAACTAGTTT CATTCCTGAA CTCTTCTATA TTATATTATC TATTGAAATT CTTTGACATC	3960
TCCATCATAA GTCGCCCAAT CTTTGCTGAA AAAGCGCTCA TTCAGATGGT AAGTCGGAGC	4020
TGGTGTGGGA TTGGATAGGA AAGGATCAAC TGCCTTGTC AAGCCAACC AACCCAACCA	4080
ACCAAGGTGA ATGGTGTCTT TCATAAAGAA AGGCTCCCCG CCGTCTTAG AAAAACTGC	4140
TATATTGGTA AAACCTTGAC TTTCTAACTG GTAGCGAATC TTCTGCACCG TTTGTTGGTA	4200
CATATCCTCT CGTAGACCAG CATAGTTCAT CCATTTTTTA TTAACAGGTG GAATGATAAA	4260
AATCGGGTTT ACCTTAGATT TAGAAAACTG TGTAAAAACC AACTGCAAGT CATTATACTC	4320
TGGCGACTTG AGATAGGTAA AGCTTTCTG AGAATCCTTT AATTCTTCA AATCCTTCTT	4380
GATCTGCTCA TTATAGAAAT AATTTTCCAT TCCCATCTCA TTATTGGAAG TATTTTTTTC	4440

1073

AGCATCTGCT TTGACAACAT CTTCTATTGC CTGATAAGAA AACTGGTCTG GCAAGATTTT	4500
TAAATACTTA GCTACATGCT TATCGTAGTT AACATAGCCT CTAACCGAAA ACTGACCAAA	4560
AAAGGAAGCT TGGCGTTCAT TAAAACGAGC CAATAATTCA ATCATTTCAT TGTCTGCTGT	4620
CGACAATTCT TCTTTACTTG CCAACTTCTG AACCAGGTCC TTCATAGCTA CGTTTGGGAA	4680
CTGTTGCAGT AAGCGAGTCG CTGCATATTG ACTAGCCTGA TCCCCAGATT GATGTTTCAG	4740
AAAAC TAGTC AACTGGTCTC CATTA AAAATA CTGCTGGAAG GCTGCTGGAT CATAGCCATT	4800
TTTACTGAAC CACTGAGGTG AGATAACATA CACAAC TTGT TTATTCTCCA GCTGTGGTAA	4860
CATCTGTTGC ATTCCAAAAT ATTGGTTAAG CGATGCAGCT CCCCCCTGTC CTAAAAGATA	4920
AGGACGGTAG GAACGATTGT ATTTCTCAGC TAATACCGCA GGATGAGCAC CGTCAAAACG	4980
AAGCCATTCA CTAGAGCCAA AGAAGGGAAC AAAACGCACA TTTGGATCAG ATAGTGCTCT	5040
GACTTTTTGA CTTCGCTCCT TAAAAC TATC GATAGTAGTA GCCACTGCTG AACGCTTTTC	5100
AGCTCCTAGA TTATGATGCA TCTCAGTAGG ATAAAAGAAA ATGAGCAGAA AAACCAACAA	5160
ACCAGCGATC AAGACCGGTC CGAAGATCAT CCATAAGCGT TTAAGCATTT TGTAGCTCCA	5220
CAATACCAGC TATGATTTTA TTAGCTGTAT TCCAGTCGTC ACGACCAAAC TCTGTTACAG	5280
GGACACGAAT GTCAAAACGG TTCTCAATCT CCACAATCAA CTCAACCGTT CCCATACTAT	5340
CCAAGACACC TGCATCAAAA AGATCTTCAT CCATCATGTC AGAAACATCT TCCATAAACA	5400
ACTCATCAAT AATTTCAATA ACTTCTGATT TGATATCCAT ATTTTATTTC CTTTTATTTT	5460
TTAAACCATA GATTATTCAA GAATCCAGAA AAGATTAAAG ATGACAACAT GACAACATGG	5520
AAAGTGACAA CCATGCCAAG CAACTGAATC CAGCGATTCT CAGGTAGGGC AGCCTTCCCT	5580
GCTTTTTTCC GTTCCTTATT GAGCGTTTTT TTCTTGCGAA CCCAGGCATC ATTGATGACC	5640
AAGCCTAGTC CATGAAAGAG TCCATAGGCG ATATAGTACC AGGTCACACC ATGCCAAAAT	5700
CCCATAATCA GCATATTTAC AATGTAGGCC ATGCTTGAGG TTACATTACG ATTTTTAAAG	5760
ACTTCTTTTC TGGTAAACAC CATCACCATT CGCATAAAGA CAAAGTCACG GAACCAGAAG	5820
GACAGACTCA TATGCCAGCG ATTCCAAAAC TCCTTTAAAT CCCTTGATAA AAAGGGCTTG	5880
TTAAAGTTCA TAGGGCTACG GATTCCCATC AAGTTTGAGA TGGCCAAAGC AAACATAGAA	5940
TAACCTGCAA AGTCAAAGAA GAGTTCCAGA CAAAAGTAT ACATAACTGC CAAGGCATAG	6000
AGATTAAAGA AGCCACCTGA CTGCAAGGCT AAATCTTCA GAGGAGGTAG TAAGGTCTCT	6060
CCTAAAACAT GAGCTAGGAT AAAC TTATAC AAAAGCCCC ACATGATATA GCGGACAGAT	6120
TCATCCAGCA TATCCATCAA CTCATCTCGC TCAGGAATAG CCTGATAATT TTCATTAAAT	6180

1074

CGCTTAAAGC GATCGATTGG ACCACTCGAG AAAGTTGGCA TGAAGAGAAG GAAACGGAGG	6240
AATTCACCAGA GGGTAAATC CTTAATCACT CCATCTCTCA GCTCGATGAC AATTCCAACC	6300
GAACGAAAGG TCAGGTAAGA AATTCCCAAG AACCCAAGCA AAGACTGCGT TCCATTGATA	6360
GCTGGTTGCA CCTTGACAAA GATAATCGGA AGTAGGGACA GAAACTAAC TAAGTAGAAG	6420
ACCCACTTGC CATCCTTGCT TTTTCGATAA TGCTTGTAAG AAAGCAGGAG CAATATTTCC	6480
CAGCAAAGGT AAATACCCAA GGCAGCTAGT TGATTGGTCT TCCACCCAC CAACATGGTG	6540
ACAATAAAGA AGAGACTTAC CAACACTTCA TACCAGGCAA AGCGTTTCTT GAAAAAGAGA	6600
CCTATAAAGA TGGGCAAGGT TGCAGCAATC ACATAAACAA AATACTGAGG ATTGCCATAT	6660
GGCTCTAAAT GAGGAAGCTG TTGAAAAAC TCCATCATCT CTTATTCACC TCGTTAATCA	6720
ATCCTTTGAT GTCAATCTTT CCATTGGAG TTAGTGGCAA ACTGTCTCGG TAAAGGAATT	6780
TAGATGGCAT CATATAGGAC ATCATGATGT CTGTCAGGTC TTCCTTGATG GCCTTGGTAA	6840
TATCGATATC TCGCTCAAAC TGCTCACGAA CACCGTCTTT TAAGATGACA TAAGCCAATA	6900
GATTTTGTAC CTTGTGGTCC TTGTTATAGC GCGGTACTGC GACAGCAGAT TCGATAAAGC	6960
GAGACTTGTT GAGGTTTGA GAGACATCTT CTAACCTCAAT GCGGTAACCG TTAAACTTAA	7020
TCTGGAAGTC CATGCGTCCG CCGTAGAGAA GCAAGCCCTC ATCTGTCATG GTTCCACAT	7080
CGCCTGTGTG ATAGGCTGGC AGATCTTCAA ACTCAAAGAA GGCTTCTGCT GTTTTTCAG	7140
GATTGTTCAT ATAACCTTTT GAAACAGCTG GCCCAGAAAC AATGATTCTT CCCTGCTCAC	7200
CATTTGGCAG TTTATTCCCT TCCTCGTCAA TGATAAAGGT TGGAGAATCA GCCTTGGTAT	7260
AGCCGATTGG TAGGCGTTTG AGAGTCGCTA ACATCTCGTC TGTCACGGCA ACTGCTGACA	7320
GAGCTACTGT CGCTTCTGTT GGGCCGTAAG CATTGATGAT ACGGGCATT TGGGAAACGCT	7380
CGCGCAGTTT TTGAGCTGTT TTGACCGTCA ATTCTTCACC ATCAAAGTAG AAATGCGTGA	7440
TTCCAGGCAT TTTCTCACTG TTGAAGTATT CAGACAACAT GGCCATATCT GCAAAGGATG	7500
GTGTTGATGT CCAGATAGCG ATTGGCAATG AAAAGATAGC CGCAAAGAGT TGCTTAAACT	7560
CCTGAGTGAT GACTGAAGGA AGAGTGAAAA GCGTACCACC AAGTGCCAAG GTCGGTGCCC	7620
AATACATGAC AGACAAGTCA AAAGAATAAG GTGGCTGTGC CAGCATTTGC GGACGACTCG	7680
GTGTCGCAAA TTCCTTATCC GTAATCATCC AGTTTGTAAG GCTGAGGAGA TTATCATGTG	7740
AAATCTGCAC TCCCTTAGGC TTACCAGTCG TACCAGAAGT AAAGATAATG TAGTAATTAT	7800
CATCTCCCTT GACTGGATGC GTGATTTTAT AGTTATTTCC TTGGGCAAAG GCTTCTTGAA	7860
CCTGAGCTAG ATTTATCATT GGTGTAGAAA CCTGCTCCAA GGGAAAGGCT GAAATGGCAA	7920
TAATCAAGCT TGGCTCTGCT ACTTCTAAAA TAGCTGAAAC TCGCTCCAAG GCCGAATGGC	7980

1075

TATCAATTGG AATGTAGGCA TGACCTGACT TAGTCAGCGC TACAAAGGTT GCCAACATTT	8040
CATATTCTTG GCCACCAAAA ACAACCACAG GAGACTTCTC AGGCAAGCCT AGTTGGTCAA	8100
TGACTGCAGC CAAACTATCC GAATCAGCCT TTAAATCGCC ATAAGTGTGT TCCTGCCCCA	8160
AAACATTATA GACAGGATAG CTAGGCTGTG TCTGAGCAAA ATGCTCAATG GTTTCATCA	8220
TATCTGCTAT TGGTTTATTT GACACAATAG GGATTCTCCT TCAAGTTAAA ATTCATTATA	8280
GATAAAGCTT CCTTGACCCT GACCAAGATA GCTAAAGAAG TAAAGCAGCC CTAGAAAGAT	8340
AAGAAAATAC AAGGCTGTCC GACCAAGAAA GAGGTACAAT TCTTTTCTCT GTTTCATCAA	8400
GAAAAACCAT TCATTTCTGT AATTTTTCGC TAAAAAAGA GTGATTCTTA CTAGCTTATT	8460
TTTCTACCAT TGTACCACTT TATATAGTAT CTTTCAATT GTTTACCGTA TGTTCCTCAAT	8520
AGATTTGAGC TTATTTTAAG GATTATACAG TTTTCTATG TATATTTTCA AATAGAGTGA	8580
TCCTGCTTCA AAACCTCCATT TCAGGAGACA ATGAAGTAAA TCTTCCATA ATAAACACA	8640
CAATATCAAG TTTTTCAC ACCTGATACT ATGCGCTTTT CTGATTTTCA AAGACTTTTT	8700
AACCACTCTC TCATTTAAAA TAATCTCGTC TGATATAAAT TAAATAGCT TCTATCATCA	8760
GACAAATGGC TGATAGCCAA AAACGATGC TAATACCAA ACTCTCAGTA ATATAGCTCA	8820
TTAGCAAAAC AAATACTGAA AATGCTAATG TAGAAATCAC TTCAGAACG GAATAGACAT	8880
TAATAAATG ATTTTCCTCT ACTGTTTCCT GAAGAAATAC ACTTTCAGGA ACTTCTTTTA	8940
GTGCGATAA CATACCAACT AAAGCTGAAA ATAATAAAAA CATCTGTGCG TTTGGAAAAAT	9000
ATAGAATAGT CAGTGCACT ATTTCCATAG CTACAAGAGG AAAAAGAATA CTTTCCCCC	9060
AAATCATCA TACCTCTCTC AACTAGATGT AACTTACAAA ACCCTGACC TCATGAGCCA	9120
CTTTCTTCCT CCTCATGAGG TCAGTTTAC TTTCTGCTGT TCCAGTATCG TTTTTCCTCG	9180
CTAGATTTCC TCAAAAGGGC AGACTCCTCC CTTGGTGCGT CACACGATTT TTTCTCTCG	9240
ACTGTTCTTT AATGCATCAT TAACGACGCT TTTCTTCTAG GTGGTTCATA AGGAACAGGA	9300
AGATTCAGGT TGACTTTTCT AATCCTAGAA TAAAGTCTG AAAACAATTC GGAATAGGCA	9360
TAGAGACTAG ACAATTTGAG GAGCTGCTTG CGTCTGTTC GAACACATTT TCCCACCACG	9420
TGAAGAAAAA GATGGCGGAA GCGTTTGATT GTTAAAGTTT GGAAGTCACC TCCAGCTAGA	9480
TGTTTGAGAA AAAGATAGAG ATTGTAGGCG ATACAGCTCA TCATCATACG AACTTCGTTT	9540
TTGATTAAGG TTGAACTATC CGTTTTATCG CCAAAAAATC CCTCCTTCAT CTCCTTGATG	9600
AAATTCTCGG CTTGACCACG TCCACGATAA AGCTGAAACT GGTCTTGGCT gTTCCACTCG	9660
TCATATTTGT AACGAGAGAA ATAACATCGT AGAACAAGTA TCCTTCTTTT C	9711

1076

(2) INFORMATION FOR SEQ ID NO: 168:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3025 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

CCCCTTTGTC AAAACTGTAA AATTAACGAC TCAACAATTC ATCTTTACAC CAATCTCAAT	60
GGAAAACAAA AACAAATTGA CCTCTGTCAA AACTGCTATA AGATTATCAA AACAGATCCT	120
AACAATAGCC TCTTCAAAGG TATGACGGAT CTGAACAATC GTGACTTCGA TCCCTTTGGT	180
GATTTCCTCA ATGATCTAAA CAATTTCAGA CCTTCTAGCA ATACTCCTCC TATTCCTCCA	240
ACCCAATCAG GTGGAGGTTA CGGTGGAAC GCGGTTATG GTTCCCAAAA TCGTGGATCT	300
GCTCAAACCTC CGCCACCTAG CCAAGAAAAA GGCCTGCTGG AAGAATTGG TATTAATGTA	360
ACTGAAATTG CCCGTCGTGG AGACATTGAC CCCGTTATTG GCGCGACGA TGAGATTATC	420
CGTGTCATCG AGATTCTCAA TCGTAGAACC AAGAATAATC CTGTCCTTAT CGGTGAACCT	480
GGTGTCGGAA AAACGGCCGT TGTGGAAGGT CTAGCTCAGA AAATTGTCGA TCGCGATGTG	540
CCACATAAAC TCCAAGGTAA ACAAGTCATC CGTCTGGATG TGGTTAGCTT AGTTCAAGGA	600
ACGGGGATTC GAGGACAATT TGAAGAACGC ATGCAAAAAC TCATGGAAGA AATTCGCAAA	660
CGTGAAGACA TCATCCTCTT TATCGATGAA ATCCATGAAA TTGTTGGTGC TGGTTCTGCG	720
AGTGATGGTA ATATGGACGC AGGAAATATC CTCAGCCAG CCCTTGCTCG TGGAGAACTG	780
CAACTAGTCG GTGCTACTAC CCTCAATGAA TACCGTATCA TTGAAAAGGA TGCTGCCCTC	840
GAGCGTCGTA TGCAGCCTGT TAAAGTCGAT GAACCAACGG TGGACGAAAC AATCACTATT	900
CTCAAAGGGA TTCAAAGAA ATACGAAGAT TACCACCACG TTCAATATAC AGATGCTGCG	960
ATTGAAGCAG CTGCAACTCT TTCCAATCGC TACATCCAAG ATCGCTTCTT GCCTGACAAG	1020
GCCATTGACC TCCTAGATGA AGCTGGTTCT AAGATGAACT TGACCTTGAA TTTTGTGGAT	1080
CCTAAAGTAA TTGATCAGCG CTTGATTGAG GCTGAAAATC TCAAGTCTCA AGCTACACGA	1140
GAAGAAGATT TTGAGAAGGC GGCCTACTTC CGCGACCAGA TTGCCAAGTA TAAGGAAATG	1200
CAAAAGAAAA AGATCACAGA CCAGGATACT CCTAGCATCA GCGAGAAAAC TATTGAGCAC	1260
ATTATCGAGC AGAAAACCAA TATCCCTGTT GGTGATTGTA AAGAGAAAGA ACAATCTCAA	1320
CTCATCCATC TAGCCGAAGA TCTCAAGTCT CATGTTATTG GTCAAGATGA TGCAGTCGAT	1380
AAGATTGCCA AGGCTATTCG CCGTAATCGT GTCGGAATTG GTACCCCTAA CCGCCCAATC	1440

1077

GGAAGCTTCC TCTTCGTTGG GCCAACTGGT GTCGGTAAGA CAGAACTTTC CAAACAACCTG	1500
GCTATCGAAC TTTTGGGTTT TGCTGATAGT ATGATTTCGCT TTGATATGAG TGAATACATG	1560
GAAAAACATA GTGTGGCTAA GTTGGTCGGC GCTCCTCCAG GTTATGTTGG CTATGATGAG	1620
GCTGGTCAAT TAACTGAAAA AGTTCGCCAC AATCCATATT CTCTCATCCT TCTCGATGAA	1680
GTGGAAGGAG CTCACCCAGA TGTATGTCAC ATGTTTCTTC AAGTCTTGGA CGATGGTCGT	1740
TTGACAGACG GGCAAGGACG CACCGTTAGC TTCAAGGATG CCATCATTAT CATGACCTCA	1800
AATGCAAGTA CAGGAAAGAC CGAAGCTAGC GTTGGATTTC GTGCTGCTAG AGAAGGACGT	1860
ACCAATTCTG TCCTCGGTGA ACTCGGTAAC TTCTTTAGCC CAGAGTTTAT GAACCGTTTT	1920
GATGGCATTG TCGAATTAA GGCTCTCAGC AAGGATAACC TCCTTCAGAT TGTCGAGCTC	1980
ATGCTAGCAG ATGTTAACA GCGCCTCTCT AGCAACAACA TTCGTTTGGA TGTAAGTATG	2040
AAGGTCAAGG AAAAGTTGGT TGACCTAGGT TATGATCCAA AAATGGGAGC ACGCCCACTT	2100
CGTCGGAATA TTCAAGACTA TATTGAGGAC ACAATCACTG ACTACTACCT TGAAGTCCA	2160
AGCGAAAAAG ATCTCAAAGC AGTTATGACT AGCAAGGGA ACATTCAGAT TAAATCTGCC	2220
AAAAAGCTG AAGTTAAAG TTCTGAAAA GAAAAATAAA TCCTATAAAA AAGGAGTAGA	2280
AAATGAAATT TTTCTGCTTC TTTTCTTACT AAAATAACTG TAATTCTTG ACAGCTTGCC	2340
CTTTGTCCAT TATGATATAT AGTAGACTGA ATCTGAAATA GTACGAAACA ATTGCTAAAA	2400
CATTTATAGA AATTAATTTT ACTTTCCCAA TCGATTGTGT CTCATCTTAT TTCAATCTGC	2460
TATAGTCAAT TGAACAAGA ACAAGACAAA AGAGCCTCAT AAAAGGTATT GCAACTTGGT	2520
AATACCTTTT TGAGGTGCTT TTTGATATGA GCCCATGTTT TCTCAATAGG ATTGTACTCA	2580
GGTGAGTAGG GAGGAAGAGG TAAAAGTTTA TACCCAAACT CTTACACAA GAGTTCTAAC	2640
TTACCCATTC TATGGAATCT TGCATTATCC ATAATAATAA CCGATGGTGT GGTAAATGTT	2700
GGTAAGAGAA ACTTCTGAAA CCAAGCTTCA AAAAAGTCGC TCGTCATCGT CTCTTCGTAA	2760
GTCATTGGAG CGATTAATC ACCATTCAAT TGTTAGACCT GCAACCAAAG AAATTCTCTG	2820
ATATCTTCTT CCAGATACTT TGCCTCTTCT TAACTGACCT TTTAATGAGC GACCATATTC	2880
TCGATAAAAA TAAGTATCGA ATCCTGTTTC GTCAATCTAA ACAGGTGCTA GGTGCTTTAA	2940
ACTATTAAAA TTCTTAAGAA ATAAGGCTAC TTTTCTGGG TCTTGTTTCAT AGTAGGTGTA	3000
GTTCCTTTT TTTTCGAGTG TAGCC	3025

(2) INFORMATION FOR SEQ ID NO: 169:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4104 base pairs

1078

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

TTTAAGGTTT TAAAAAAGT TTTCGAAAGG TTTCTTCTTT ATTTTSTAAG GGAGAGATAA	60
CGTTGATATC TAAATCGTGG TCAAAGCCGG CAATTTTCC TTTAGATGTG TATTGGTGAA	120
TATCATAATC TAAATCAGTT TTAGGACTGC TCTCCAAAAA TCCTGAGTCT GAGCCGTAGA	180
CGGAATCCAA ACAGAGGTAA ACTTGCCTGT ATCAATACTG TGTTCCTCCA TGAAGTAGAC	240
ACCAACGTAG ATGCCGATGT TTTTAGCACC CAGTGATGCT AGTTTGTCTC GAAAGTTTTC	300
GACACCTTCG TTCATATTAG ACATGGTTTT GTCTTCCACG TCAAGCCAAT AGTAACTAGG	360
GCTGTAAGGA GAGGCAGCAT TGTAGAAAAC TTCGGCAGCC TTTTCCATTT CTGGGACACT	420
TTTTCCAGCT ACATAAGCGT AGACAGCAAC TGGGACATTC CGCTTTTGAA GTTCAGTGAT	480
ATGACTCTTA TAGGCCTTGT CTATTCCATT GATAAATGAA GCATCATTTT CTTTGTCTGT	540
TTGAGCACCA CTGTGAACAC GAACAATAGC ACCTGAAATA TTTTGTGAGA GGGCATCGTA	600
GTTGATTTCC TCAGGACGCT GCCAGCCAGA GAGGTCAATA ATCGGTTTGT CTAAGTGTTC	660
CAAAGCCTGT GCTTCAATCT GTGCTATATT GGATTTTGT TTAACGATT GGCTGTCATT	720
AAGTGGGCGA TTGATGATTA AAATGAACAT CATAATCCCA AAAAACTAA ATAAAATAAG	780
TGGATGAATT TGTTTTCTCA TAICTTATAA TTCTACCCTA AAAATCAAAA AAAATCAAAA	840
AAATGGGTGA AGGAAGAGAC TTTAGAGCAT TTTTTCATTC AAGAGTGCGG AATGATTGTA	900
AATATGGTAT AATAAAAGGG AATTTCTACA GAAAAGAGAA GATTATGTCA AATTTTGCCA	960
TTATTTTAGC AGCGGGTAAA GGGACTCGCA TGAAATCTGA TTTGCCAAAA GTTTGCACA	1020
AGGTGCGGG TATTTCTATG TTGGAACATG TTTTCCGTAG TGTGGGAGCT ATCCAACCTG	1080
AAAAGACAGT AACAGTTGTA GGACACAAGG CAGAATTGGT TGAGGAGGTC TTGGCTGGAC	1140
AGACAGAATT TGTGACTCAA TCTGAACAGT TGGGAACCTG TCATGCAGTT ATGATGACAG	1200
AGCCTATCTT AGAAGGTTG TCAGGACACA CCTTGGTCAT TGCAGGAGAT ACTCCTTTAA	1260
TCACTGGTGA AAGCTTGAAA AACTTGATTG ATTCCATAT CAATCATAAA AATGTGGCCA	1320
CTATCTTGAC TGCTGAAACG GATAATCCTT TTGGTTATGG ACGAATTGTT CGTAATGACA	1380
ATGCTGAGGT TCTTCGTATT GTTGAGCAGA AGGATGCTAC AGATTTTGAA AAGCAAATCA	1440
AGGAAATCAA CACTGGAACA TACGTCTTTG ACAACGAGCG TTTGTTTGAG GCTTTGAAAA	1500
ATATCAATAC CAATAACGCT CAAGGCGAAT ACTATATTAC AGACGTCATT GGTATTTTCC	1560

1079

GTGAACTGG TGAAAAAGTT GGCCTTATA CTTTGAAAGA TTTTGATGAA AGTCTTGGGG	1620
TAAATGACCG TGTGGCGCTT GCGACAGCTG AGTCAGTTAT GCGTCGTCGC ATCAATCATA	1680
AACACATGGT CAACGGTGTT AGCTTTGTCA ATCCAGAAGC AACTTATATC GATATTGATG	1740
TTGAGATTGC TTCGGAAGTT CAAATCGAAG CCAATGTTAC CTTGAAAGGG CAAACGAAAA	1800
TTGGTGCTGA GACTGTTTTG ACAAACGGTA CTTATGTAGT GGACAGCACT ATCGGAGCAG	1860
GAGCGGTCAT TACCAATTCT ATGATTGAGG AAAGTAGTGT TGCAGACGGT GTGATAGTCG	1920
GTCTTTATGC TCACATTCTG CCAAAATCAA GTCTGGGTGC CCAAGTTCAT ATTGGTAACT	1980
TTGTTGAGGT GAAAGGATCT TCAATCGGTG AGAATACCAA GGCTGGTCAT TTGACTTATA	2040
TCGGAAACTG TGAAGTGGGA AGCAACGTTA ATTTCCGGTG TCGAACTATT ACAGTCAACT	2100
ATGACGGCAA AAACAAATAC AAGACAGTCA TTGGAAACAA TGTCTTTGTT GGTTCAAATT	2160
CAACCATTAT TGCACCAGTA GAACTTGGTG ACAATTCCTT CGTTGGTGCT GGTTCAACTA	2220
TTACTAAAGA CGTGCCAGCA GATGCTATTG CTATTGGTCG CGGTCGTCAG ATCAATAAAG	2280
ACGAATATGC AACACGTCTT CCTCATCATC CTAAGAACCA GTAGGAGCCT ATCATGGAGT	2340
TTGAAGAAAA AACGCTTAGC CGAAAAGAAA TCTATCAAGG ACCAATATTT AACTGGTCC	2400
AAGATCAGGT TGAATTACCA GAAGGCAAGG GAACTGCCCA ACGGGATTG ATTTTCCACA	2460
ATGGGGCTGT CTGTGTTTTA GCAGTAACGG ATGAACAAAA ACTTATCTTG GTCAAGCAGT	2520
ACCGCAAAGC TATCGAGGCT GTCTCTTACG AANTTCCAGC CGGAAAATTG GAAGTAGGAG	2580
AAAACACAGC CCCTGTGGCA GCTGCCCTTC GTGAATTAGA GGAAGAAACA GCCTATACAG	2640
GGAAATTAGA ACTCTTGAC GATTTTTATT CAGCTATTGG CTTTGTAAAT GAGAAGTTAA	2700
AACTATATTT AGCAAGCGAT TTGACAAAAG TGGAAAATCC GCGTCCGCAG GATGAGGATG	2760
AAACCTTGGA AGTCCTTGAA GTGAGCTTAG AAGAAGCGAA AGAATTAATC CAATCAGGTC	2820
ATATCTGTGA TGCCAAGACA ATTATGGCTG TTCAGTATTG GGAGTTGCAG AAAAAATAGA	2880
GGAGGTCAGT ATGGGTAAAT CTTTATTAAC GGATGAAATG ATTGAAAGAG CTAATAGAGG	2940
CGAAAAAATT TCAGGTCCTC CTTTGCTAGA TGATAATGAG GAACTAAGA TTTTACCAAC	3000
CTCTTCTTCC CGTTTTGGTT ATGCCAATCC TAAGGATCAT GGTTTTAGCC AGGAAACCTT	3060
GAAGATTGAG GTCGAACCAT CTATTCATAA AAGCCGTCGT ATTGAAAATA CCAAGAGAAA	3120
TGTCTTCAAT TCTAAGTTGA ATAAAATCTT ATTTGCGGTC ATCTTCTCTT TGATTTTGCT	3180
TGTTTTAGCA ATGAAACTTT TGTAATAGAA AAGGAATTGA AATGAAAATA GGAATTATTG	3240
CTGCTATGCC AGAAGAACTG GCTTATCTGG TCCAGCATTT AGATAATGCC CAGGAGCAAG	3300

1080

TTGTTTTTGG GAATACCTAT CATACAGGAA CCATTGCTTC TCATGAAGTC GTTCTTGTAG	3360
AAAGTGGAAT TGGTAAGGTC ATGTCCTGCTA TGAGTGTGGC GATTTTGGCT GATCATTTCC	3420
AGGTGGATGC CCTTATTAAT ACGGGTTCAG CTGGGGCAGT AGCAGAAGGT ATCGCTGTTG	3480
GGGATGTCGT GATTGCTGAC AAATTAGCCT ATCATGACGT GGATGTCACA GCTTTTGGCT	3540
ATGCTTATGG ACAAATGGCG CAACAACCGC TTTATTTCCA ATCAGACAAA ACCTTTGTTG	3600
CTCAATCCA AAAGAGTTA TCTCAATTGG ACCAAAACCTG GCATCTTGGT TTGATGCTA	3660
CAGGAGATAG TTTTGTGCA GGAATGACA AGATAGAAGC GATTAAGTCC CATTTCCAG	3720
AACTTTTAGC CGTGGAGATG GAGGGGGCAG CTATTGCTCA AGCAGCGCAT GCCCTCAATC	3780
TCCCAGTCTT AGTCATCCGA GCTATGAGTG ACAATGCCAA CCATGAAGCA AACATCTTTT	3840
TTGATGAGTT TATTATCGAA GCTGGACGTC GCTCTGCCCA AGTCTTGTG ACCTTTTGA	3900
AGGCTTTAGA TTAAGCGGAA ATTTGACAGT TTTTCTAGCT TATGATAAGA TTTAAGTAA	3960
GAAAAGCTAG AAAACGTTTC AGAGGATATT ATGAGTATTG AAATGACCGT CAGTGAGATT	4020
GCAGAGGTCT TAGGATTATC TCGCCAAGCA ATCAATAACC GTGTCAAAGA ATTACCAGAA	4080
GAAGACACAG ATAAAAATGA CAAG	4104

(2) INFORMATION FOR SEQ ID NO: 170:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8876 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

CACGGATAGG CTCGGCTTTC ATCAGTCCTC AGGCTGATTT ACTAATAGCA ACTTTCCTCG	60
ACAAAGTCCA CAGCGATACG TnTGGGTATC AATCCCTACGC TTACGCTGAT ACCTTTGCTG	120
GCAGGATTGG CAACGATAGA GCTTGATTGG CTTGGAGTTA CTATTGGGCA AGGATGGTAC	180
AAACCGTAAT CCATCCACTG CTTTCAACAG TTCCTTAAAA TCCCGATCCT TGTGTTGATA	240
GCCTTTCCCT TGAAAATAGA GGTGATAATG ACAGAGTTCA TGTCGGACAA TTTTCCTAAA	300
AACGTCCAAC CCCAGTTCCT GATAAACCTT GGGATTAAAA TCCAAATGCC CATCTTTGGG	360
GAAAAATCGC CCACCTGTCG AACGTAGACG CCTATTCCAC TGGACATGAT GGATAAAAGG	420
TCTGCCGAAG TCTTCTAGTG AAACCTGCTT GACGTAATCA GTCAGTTTCA TTTGGAGCTA	480
GGAGAGACAG ATTAACTTTT TCACGTTTCA TATCAATTTT CTTAACCCAA ACGCTCACCA	540
AATCTCCAAC TGCCACCACT TGACTAGGGT GTTTGATAAA CTTGCGACTC ATATGGGAAA	600

1081

TATGGATGAG ACCGTCCTCA TGAATTCCTGA TATCAACAAA AGCACCGAAA TCAACAACGT	660
TACGCACCAC TCCCTCTAGC TTTTGTCCAA CCACTAAGTC CTTGATATCT AGGACATCTT	720
GGCGAaCACA GGTGCGTCAA AGGAATCACG GAAATCTCGA CCTGGTTTGA GAAGATCTGC	780
AATGATATCT TTAAGAGTTT CTGGACCAAG GTCTAACTCT TCGGCCATTT CCTTGACTGA	840
AAGCGACTTG AGTTTGCTTT GGGCTTCTTC GTTTAGGTCT TTAATATCTA AACGTTTGAA	900
GAGTTCCTTA ACTGCAGTGT AATTCTCTGG GTGAACCTCT GTATTATCAA GGATATTGCT	960
ACTTTCAGGG ATACGAAGGA AACCAGCAGC CTGCTCAAAG GCCTTGGCTC CCAGACGAGG	1020
AACTTCTCTG ATTTGGGCGC GTGAAGTGAT TTTTCTTCT TCCTCGCGGT ATTTGACAAT	1080
ATTTTCAGAG ATAGTTTGTG TGAGTCCAGC TACGTGTGAA AGAAGAGCTG GGCTAGCTGT	1140
ATTGACATTG ACACCAACTT GGTAAACCAC TGTATCGACA ACAAAGTCCA GACTCTCAGA	1200
TAGTTTCTTC TGACTGACAT CGTGTGGTA TTGACCGACA CCAATTGACT TAGGATCGAT	1260
TTTGACCAAT TCCGCAAGAG GATCTTGCAA ACGACGGCG ATAGAAATGG CAGAGCGTTT	1320
TTCAACGGTC AAGTCTGGAA ACTCCTGACG AGCAAGTTCG CTGGCAGAAT AGACAGAAGC	1380
ACCACTTTCA TTAACGATAA CATAGCTGAC TTCAGGGAAA TCTTTCAGAA CTTCCGCTAC	1440
AAAAGCTTCA CTTTCACGAC TGGCCGTTC ATTTCCAATG GCAATAATCT CTACACCGTA	1500
TTGACCAATT AAATCTGCTA AATCTTCTT GGCCTTCTCG ATTTGACGAG CTGATGCTGG	1560
TTTAACAGGA TAAATAACCT GAGTTGTCAG CATTTTTCCT GTTGCATCCA CGACAGCTAG	1620
CTTGGCACCT GTACGAAAGG CTGGGTCAA TCCAAGAACC ACGCGCCCTT TCAGTGGAGC	1680
AACCAAGAGG AGATTGCGCA GATTGTCAGA AAAAAGTTGG ATAGCTCCTT CTTCAGCTTT	1740
CTCAGTAAAT TCTGTCCGAA TACGACGCTC GATAGCAGGC AAGACCTTTT TCTTAACGGA	1800
TTGCTGAACA ACTTCATCAA TATAAGCATT TTTCACCTTG AAACGAGTAG CAAAGAAGGC	1860
AAGAATACGG TCCGTCGCAT GTTCAAAACC GATCTTCAAG ACACCAAGTT TCTCCCCACG	1920
ATTGAGAGCC AAGGTACGAT AGCCTTGCA AGTTCCAAC GTCTCTGAAA AATCATAATA	1980
AATCTGAAAA ACCTGCTTTT CATCAAGACT TTCATCCTTG GCTTGAGAAG TAAGTTTAGA	2040
GTGTCCTCAGC ACTTCTGAT AAGTCATAGA ACGCAAGGTC ACATCTCCG ATAAGGCTTC	2100
GACCAAAATA TCAACTGCAC CGGTCAAGGC TTCCTTGCCA GTCGCAAATC CTTACAGAC	2160
GAACCTTTCA GCTTCTTCT CTAAGTCAAC TATATTCTGC AAAATCAAGC GAGCAAGAGG	2220
AAAGAGTCCA GCTTCACGG CAATGGTTGC CTGGTACGA CGCTTTTCCT TATAAGGAAG	2280
ATAGAGTTCT TCAACGTCTG CTAATTTTTC GGCAACTAAG ATAGCTTCTT CCAATTCCTT	2340

1082

GGTCAACTTA CCTTGTCTT GAATCTTAGC TAAGACAGCT TCCTTACGGT CATTGAGATT	2400
TGTCAGACTT TTATCCAAAT CAATAATAGC CTTAATCGCC ACCTCATCCA GACTACCAGT	2460
CATGTCCTTG CGATAACGCG CGATAAAGGG AATACTCGCC CCTTCAGCTG TCAAACCTTAG	2520
AACGGTATCA ATTTGCTTTA ACGTCACTCC CAAATCCTGA GAGATTTTTT CATATTTTTT	2580
ATCCATAAAT CTATTATACC ACAAGCTAAA CGTTTCAAAT TAACTCGTAG AACATTTAAA	2640
AAATATGTAG GAAATAGATT TATATGCTAC AGCGCAATAA CTGCACTTA AAGAGCATTG	2700
CCACCTTTTT TTAACCAAGC CATGATATCA AAAGTATTTA ATGGATCAGA CATAATAGCC	2760
AGTTCTGGAA GATGTTCCTG ACCTGGAATA ACACATTGAC TTTTCAAATT TTTATATGGA	2820
CGATTGACTA AAATTAATTT ATTAGAATAA GGAAGATTAT CCATCTTATT TAAAATTTCT	2880
TCACTAGCTG AATCTTTATT ATCAAATTTA AAATAAAGAT TATTCCAATT TATGCGTTTT	2940
TTTCTTTTTT CCCACTTAGT TCGTGCCTCT TCAATACTAG AATAATGTAG AAAATGAATA	3000
TCTATATCTC CTAAGTGCCC CAAAGGATAA ACTTCATGAG TCCAGCTCGG TGAAATAAGT	3060
TCCTCTTCGA AAACAAGTTC TTGTTCCATA TAATAACGAA AATGCTTTGT AAGTTTATAA	3120
TAATCATCAG GAAGAATAAA TAAACCAACA AAAGTGTTT TATATTGAAA ACCAAGCTGT	3180
TTATAAATTA ATCCTCCAAC ACAATTATTA CTTATAATCG TAAAATCTAA TCTATCAAGC	3240
TCAAGAAAAG GGAAAATTCC TTTCTCTGCA GCTATTAACT TATGATAAAC AATATCAGAA	3300
TCTAAATATT CACCGTCATT TTTTAACCAA GCACTAAAAT TTGCCAATTC TTGAATATAT	3360
TGTTTTTTTCG CTCTTTCTAT ATCATAGTTT TCTAAGACGG CGCAATCTTT GATTCTATTT	3420
TCATAATTTT CTAATATGAT TTTGTAGGAG TCTTTTAGAG GTTTAGCATC TATAACAGGT	3480
TTATAGATAT ATGTCGGGAA ATTAATATAG GTTGCAGTTT TAGAGTGAAT ATAAAGTCTC	3540
CAAATAAGGT TGTTTATATC AAATTGATTT ATTTTTCGTA AAAGCTTACT ATTGAATAAT	3600
TTTCCAAATA ATGAGCGATA TTGTTTCTTA ATTCGATGAT CTGTATCATC CATCTTTTGT	3660
AAAACCTGAA CATTCGTAA ATTTTCTGTC AACCAATTAT CCCCCAAAA AGGATAAAAG	3720
TAAAATACTC CATCAACCAA ATCAGCAAAA TGACCAAGAA CAACATCAGA ATCGGATAAT	3780
TTTATCGCAT GATACATCTT TTCAAATGTC CAATCAAATA ATGAATCATT TGAAGATAGA	3840
AACGTAATAT AATCTCCTGT AATCATATCA GACAACTCAG CAAAAGAATT CTCATCTATA	3900
ATCTTAATAT TAAATGATAG ATTCATCTGT TGGCTAATGG AAGCTATCTC CTCTGTAGAT	3960
TGATTTACAA TAATAACTTC TATATCTTTT AATGTTTGTC TCTCCACTAT TGACAAAGAC	4020
TCTAATAAAC TATTTTATC TCCTTGATGT AACAAAACAA CACTAATTGA GTAAGTCAGT	4080
TTGACTACCT CCCATAATTT TCTGATAATG ATTTTCTTTT TATTTAATTA TAGCACAATT	4140

1083

ATGATATATA TCAGGTAATA TCAAGCTATA TTATCTCTTA GCTACTCAAT TTGAAATTTT	4200
AACTTTTCCC TTTTCCGCAA AATAATAGTA TAATAGAGGT AGAATCTAGA ATCGAGGTAC	4260
ACCTATGGCT GTCAAATTTA CAAAACGAGA CGACTTGGAC AAGATGTTTG AAGAGTTTGC	4320
TAAACTCCCT GATTTGAAAC AAGTTACTTT CCCTGATGAC AAAGAGAAAA AAGTCAAAGC	4380
AGAAAAGAAA AACTAGATGA CTGCTTTTCA ACAACTCCCA TCTAGTGTAC TTCAACTGG	4440
AGCCATTTT CTCTCCATTA TCATTGAAGC CCTTCCCTTC GTTCTGATAG GAAGCATTGT	4500
CTCAGGGCTG ATTGAAGTTT ATATCACACC TGACAAGGTT TATCATTTTC TCCCTCGAAA	4560
TCGTTGGGGG AGAATCTTTT TTGGGACCTT TGTGGGTATA CTTTTCCTT CTGTGAATG	4620
TGGAATCGTC CCCATCATCA ATCGTTTCTT GGAAGAAAAAG GTTCCAAGTT ACACGGCCGT	4680
TCCTTTTCTT GTGACAGCAC CTGTTATCAA TCCCATGTGT CTTTTGCGA CCTATTCTGC	4740
CTTTGGCAAC TCCTTCCATG TCGCCCTATT ACGAGCTCTG GGTTCCTTC TTGTGGCTGT	4800
AATACTAGGA ATTTTCTTAG GATTTTCTG GCAAGAACCG ATTCAGAAAG AAAATCGTCT	4860
GGCTGTGAT GAGCATGATT TTTCTTACTT GAGTCTGCA AAAAAAGTTT TTCAAGTCTT	4920
TGTGCAGGCC ATTGATGAAT TTTTGTATAC GGGGCGTTAT TTGGTATTTG GCTGCCTCTT	4980
TGCTTCTATA ATACAGGTCT ACGTTCGAC TCGGATTCTG ACCTCTATCA GTGCGACCCC	5040
TCTTTTGGC ATCCTGCTCT TGATGATTTT AGCCTTCTT CTTTCGCTCT GTAGTGAGGC	5100
GGATGCCTTT ATAGGTGCTT CTCTTCTCTC GAGTTTCGGT TTGGCACCAG TTCTGGCCTT	5160
TCTCGTCATT GGTCCAATGC TGGATATCAA AAATATTCTC ATGATGAAAA ATTACTTGAA	5220
AGCACGATTT ATCAGTCACT TCATAACAAT TGTAACTCTT GTCGTCTTAG TCTATTCTCT	5280
CTTGATTGGA GTTATCCTAT GATTCGATTT TTAGTTTLAG CTGGCTATTT TGAAGTACT	5340
ATTTACCTCC ATCTGTCGGG CAACTAAAC CAGTACATCA ACATGCACTA TTCCTATCTG	5400
GCCTATATCT CCATGGTGCT TTCTTTTATC TTGGCTATCG TTCAATTGTA TATCTGGATG	5460
AAGCAAGTCA AAACCCACAG TCATCTGAAC AGCCGATTAG CCAAGATAAC GAGTATTTCT	5520
CTTCTGGCTA TTCCACTTGT CATCGGCTTA ACTTTCCTCA CTGTAGCTT GGATTCTCAG	5580
ACTGTTTCTG CTAAAGGTTA TCATTTCCTC CTATCGGAAG GAACGATCT AGCCATTCTG	5640
ACAAGCGAAG GGACGACAAG CCAATATTTG AAACCAGATA CCAGTTCTTA TTTTCAAAA	5700
TCAGCCTATG AAAAGGAAAT GCGAACGGCG GCGGATAAAT ACTTATCCCA AGATACTATT	5760
CAGATCACTA ATGAAAATA TAIGGAAGTC ATGGAGGCTA TCTACGACTA TCCAGATGAG	5820
TTTGAGGGCA AGACAATCCA GTTTACAGGC TTTGTCTATA ACGACCCAG TCATGCCAAT	5880

1084

AGTCAATTTC TGTTCGATT CGGCATTATC CACTGTATCG CAGATTCTGG TGTCTATGGA	5940
TTGCTGACCA AGGGCAATAC CCGGCAGTAT GAAAACAACA CTTGGATAAC AGCCAAAGGA	6000
AAACTGGTCA ATCACTACCA TAAAGAACTC AAACAAAACC TTCCAACCTT GGAAATCGAC	6060
AGCTTTACCA AAGTCGATAA ACCAGAAAAT CCTATGTAT ATAGAGCTTT TTAAGAAAAT	6120
CAAGATAAAA ACCAACAAGT TCTCTTCTGA ATAACAGAAA AAGAGCCTGT TCGTTTTTTG	6180
TTATATGAAA ATTAGTGACT TGTAGATTTT CATCTTATAC CATTCCCAGC AATACAAGTA	6240
GCTCATAGAA AATAAGCGAG CCACTCATTC ATTAGACTAG CGATTTCCTT AGGTGCTTGA	6300
GTATAAAGCT CATGGCCAAA GTTTTCTAAA AAAATAGTAT CAAAATAGTC TGGCAATTCT	6360
TTTAGGGCTT CCTCTCTCCA TGTAGCTTCA TTAGGATAGC GAGGACTAAT AAACAAGGTA	6420
TCTCCCACTT CTCTCTTAAA AGCTTGTATT TTTCTCCGTA GcGGAGTATC GCTTCTATAT	6480
TTTCATAATT TATAGCCAAC TCATATCTAT TATACTCAAC ATTCCAGTGA TAAGACTGTC	6540
TTACAGCTTT CTCCATATTT TCTGACCAAT GCTTTGCTTC AGATTTTCTT TTAGAAGTAA	6600
GAACATCTAA GTCCGAAACA ATTTGAGATT TGATATAATT TTTAGTTTCC TCTAACTCTG	6660
TATCCAAAGG TAAAACTTA TCTAAATCTA GATAGCCACC ATCCAAAAGA ATCAGTTTCT	6720
TTACTTCTTC AAATTCCGAT GCGAAATAAC GAGCTAAATC TCCTCCAAGA GAATGGCCTA	6780
TCAGACAGAT AGATTCTTCC TCTACAATTT CATTTTAAAA CCATGATTTC AATTCTGTTT	6840
CATCTCGAAG ATGCTTTTCA TATGGATTTA GAAAATAGAC CTGCGAATCT AGTTCTTGAA	6900
GAAAATCCTT GCTATGATAG GCATTGCTTC CCAAACCGCC AATAAAATAT TTTTTCATTC	6960
TCTACTTAAT ACTATGCTTA TTCATCTTTT GTTCAAAGAT AGTTGTGATA ATCTGACGCA	7020
ATTCTTCGCG TTTTTTTTCT GGAATCTCAC CACTTGTTTG AGCTACAGCG TAGAGTTCAG	7080
GGTATTCAAT TGAAATGCGT TTAATCGTAC GTGTGTAGC ATGTTTTCTG ACAAAAAACG	7140
GGATTGCTT AATCAAGTCT TGTGGGACTA GCGCCAGAAT CTTCTCAGTA GTTCTTTTGT	7200
CACTAATATT AGACATTGTA AGCCTTTTCT TAATCATTTT CTGTTCTTTT TCTGTAAAA	7260
CTTTTAATTC CATTGATTA GTCCCTCCTAT TTTCTCTAAG TTAATTAATG TACTAATACA	7320
GATGAAACTA CAAAGAATAA ACTTTAAGAA ATCTTCTCAC TGATAAGATT TTAGCATTAG	7380
ACTTCTGCG AAACAAAATA TGGTATAGTA GTTCTATGAA TTATGAAGCA AGTAAACAAC	7440
TAAGTATGTC ACGATTAAA CGTCTTGTG GTGTTTCTG CACGACTTTT GAAGAGATAT	7500
TAGCTGTATT AAAACAGCT TATCAACTTA AACACGCAAA AGGTGGACGA AAACCTAAAT	7560
TAAGCCTAGA AGACCTTCTT ATGGCCACTC TTCAATATGT GCGAGAATAC CGCACTTATG	7620
AAGAAATTGC GGCTGATTTT GGTATTCACG AAAGCAACTT AATCCGTCGG AGCCAATGGG	7680

1085

TTTAAGTAAC TCTTGTTCAA AGTGGTGTTA CGATTTC AAG AACTCCTCTC AGTTCTGAGG	7740
ACACGGTAAT GATTGATAGC CATTCCCATC AATATCGTAT CTTTGGACAT AGCCAATAAA	7800
TGTTTCATTT TTGCGTGGTT TCTGGCTATT AACGATTGAA ATAACCCACC AACTTATCAA	7860
AAATAGAAAT AAAAATCCTA AGATTACTGT CATATCATAA CACTATTAAA GTTTAACCCA	7920
CTTATCATTA TCCATGATAA AAGGCTTAGC CAGTCCCTCG CCTGTATAAT CCGCATACTT	7980
GGTGCCCAA TACTTGTAGC AATCTTCCTT ACTAGCAAAT TTAATCGCTT GGTAGGGCTC	8040
TTCGAAAGTC AATTCTCTA CAAATAAGAA ACCGTCATCA GCAGGACTA AGACCCCAAC	8100
GTGGCCTACA AACAGATACT CGCCATCCAA ATGTGCGTGC AAGACTACAG ACAGCATTCG	8160
AGCTTTTTC TGAATTGAA ATTGTGAGAA GAATGCTTCC ATCTTTTCAG CGTGAACCTT	8220
GACATCTGTA GTTGACTCAG TTGGAAGTCT CGAAAATAGA ATATCAAACCT CTTCTTATC	8280
TTGTGAATCA AAGACCTTTC CTTTATCAAT CGCATCATTA TCTAGGAAAA GCAACTGGTC	8340
ATTCTTTTCA AGCTTTGGAA TGGTGACTGA ATTTTTCAAA AGACAATAAC TATTGATACG	8400
GCAGTTGGTC CCAACAAAAT CGCCCTTCTT TTGATTCCAG AGATGACTGA TTTTCTCAAC	8460
ATCGTATTCG GTGTGAGTAA AGGAAGTGAA ATCTCCTGAT AAGCCAGTTG AGCCGACAAT	8520
GGTATTATAG TCATTAACGA GATTAAAAAA TGCATCAACA CTATTTGGAT CCAAGTGAGC	8580
TGATAAGAGA GATTTGACCT CTTCTGTACT TACCTGGTTG TTTAGGTTGG TGTATGAAGC	8640
TTTCCATGGA ACTTTCGCTG AACTGCTTTG CCTTTGATTC GTCCCCTCAG AAGTAGCATG	8700
TTGTTGTGTA CAAGCAGCCA AGCCTAAAAA CAAGGCTGAA CAGATTCCTA ATGTGGCTAA	8760
TTTCTTTGAT TTCTTCATTT CTTTCTCCTA AATGTCTTGG ATTAAAGTTT CTTTAACTAT	8820
TGCTTTACAG ATATTGATTA CTTTCTCATT TAATGTGTTC ATCGTCTTTC CTCCGG	8876

(2) INFORMATION FOR SEQ ID NO: 171:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14736 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

CGCAAACCTT CGCGGTCGGA AGGTAGTTTT ATGACACGAT TTGAGATACG AGATGATTC	60
TAICTCGATG GAAAATCATT TAAGATTTTA TCTGGTGCCA TTCATTATTT TAGGGTTCCT	120
CCAGAGGATT GGTATCATTC GCTCTATAAC TTGAAGGCTC TTGTTTAA TACGGTAGAG	180

1086

ACTTATGTTG CTTGGAATTT ACACGAGCCT TGTGAAGGTG AGTTTCATTT TGAAGGTGAT	240
CTGGATTTAG AGAAATTTCT CCAAATAGCG CAGGATTTGG GTCTCTACGC AATTGTGCGT	300
CCGTCTCCAT TTATCTGTGC GGAATGGGAA TTCGGTGGCT TACCAGCTTG GCTCTTGACC	360
AAGAACATGC GAATTCGCTC ATCCGACCCA GCATATATCG AGGCAGTTGG TCGCTACTAT	420
GATCAGTTAT TGCCAAGACT GGTGCCTCGT TTGTTGGACA ATGGTGGCAA TATTCTCATG	480
ATGCAGGTTG AAAATGAGTA TGGTTCTTAC GGAGAAGATA AGGCTTACCT GAGAGCGATT	540
CGACAGCTAA TGGAAGAGTG TGGCGTAACC TGTCCCCTCT TTACATCAGA TGGTCCATGG	600
CGAGCTACTC TGAAAGCTGG AACCTTAATT GAAGAGGACC TCTTTGTAAC AGGAACTTT	660
GGTTCTAAGG CACCTTACAA CTTTTGCGAG ATGCAGGAAT TCTTTGATGA ACATGGTAAG	720
AAATGGCCAC TCATGTGTAT GGAGTTCTGG GATGGTTGGT TCAATCGCTG GAAAGAACCG	780
ATTATCACAC GGGATCCTAA GGAATTGGCA GATGCAGTTC GAGAGGTTTT GGAACAAGGC	840
TCTATCAATC TTTACATGTT CCACGGTGGT ACAAACTTTG GTTTCATGAA TGGTTGCTCA	900
GCTCGAGGAA CTTTGGACCT GCCACAAGTT ACGTCTTATG ATTACGATGC CCTTCTGGAT	960
GAAGAAGGAA ATCCAACGCC TAAATATCTT GCAGTCAAGA AGATGATGGC AACACATTTT	1020
TCAGAGTATC CGCAGTTGGA ACCACTCTAC AAAGAGAGTA TGGAGTTGGA TGCTATTCCA	1080
CTAGTTGAAA AAGTTTCTTT GTTTGAAACC TTAGATAGCT TGTCAAGTCC TGTAGAAAGT	1140
CTCTATCCTC AAAAGATGGA GGAGCTGGGA CAAAGTTATG GCTACCTACT TTATCGAACA	1200
GAAACAAACT GGGATGCAGA AGAAGAAAGA CTTCTGTATCA TTGATGGTCG AGATAGGGCC	1260
CAGCTGTATG TCGATGGTCA GTGGGTAAA ACTCAATATC AGACAGAGAT TGGGGAAGAT	1320
ATTTTTTATC AAGGTAAAA GAAAGGGCTA TCTAGGTTAG ATATCTTGAT AGAAAATATG	1380
GGCGGTGTCA ACTATGGGCA TAAGTTCTTA GCGGATACGC AACGTAAGGG AATTGCGACA	1440
GGGGTCTGTA AGGATCTGCA TTTCTTACTA AACTGGAAAC ACTATCCACT CCCACTAGAC	1500
AATCCTGAGA AAATTGATTT TTCAAAAGGA TGGACTCAAG GACAACCAGC CTTTACGCT	1560
TATGACTTTA CAGTCGAAGA GCCAAAAGAT ACTTACCTAG ACTTGTCTGA GTTTGGTAAG	1620
GGGGTTGCCT TTGTCAATGG GCAGAATCTA GGACGTTTTT GGAACGTTGG CCCAACTCTC	1680
TCACTTTATA TCCCTCATAG CTATCTCAAG GAAGGTGCCA ACCGCATCAT TATCTTTGAA	1740
ACAGAAGGTC AATATAAAGA AGAGATTCAT TTAACCTGTA AACCTACACT AAAACATATA	1800
AAGGGGGAAA ACTTATGACA ATTGTAGGAT GCCGTATTGA TGGACGTTTG ATCCACGGAC	1860
AAGTAGCCAA TCTTTGGGCT GAAAACTAA ATGTTTCACG CATTATGGTT GTAGACGACG	1920
AAGTTGTCAA CAACGATATT GAAAGAGTG GTTTGAAACT TGCGACACCA CCAGGTGTGA	1980

1087

AATTGAGTAT TTTGCCAGTT GAGAAAGCTG CAGCCAATAT TCTTGGTGGC AAATACGATA	2040
GCCAACGTCT CTTTATCGTG GCTCGTAAAC CAGACCGCTT CCTTGGTTTG GTAGAAGCAG	2100
GTGTACCACT TGAAACCCCTT AATGTTGGGA ATATGTCTCA AACACCAGAA ACTCGTTCTA	2160
TTACACGTTC TATCAACGTA GTAGACAAGG ATGTGGAAGA CTTCACAAA CTGGCAGAAA	2220
AAGGTGTTAA ACTTACTGCT CAGATGGTTC CAAATGATCC AATTTACAGC TTTTGTAGCT	2280
TATTAAAATA GGAAAAAAT TTTTAGGAGG TCATTGTTAT GATACAATGG TGGCAAATTT	2340
TACTTCTCAC TTGTACTCA GCTTATCAAA TCTGTGATGA GTTGACGATC GTTTCATCTG	2400
CAGGTCCCC TGTATTGCT GGTTCATTA CTGGTTAAT CATGGGAGAT GTGACTACTG	2460
GTTTACTTAT CGGTGGTAAC TTGCAACTGT TCGTCTTGG GGTGGTACC TTCGGTGGTG	2520
CTTCTCGTAT CGACGCAACT TCTGGTGGG TTCTTGGCAG ACCTTCTCTG TTTCACAAGG	2580
AATTGATGCA CCGCTTGCCA TTACTACAAT CGCTGTACCA GTAGCAGCTC TCTTGACTTA	2640
CTTCGACGTT CTGGTGGTA TGACTACTAC CTTCTTCGCT CACCGTGTGG ATGCTGCAAT	2700
CGAACGCTTT GACTATAAAG GTATTGAACG CAACTACTTG CTTGGTGGCA TTCCGTGGGC	2760
TCTATCTCGT GCCCTTCCAG TCTTCTTGC CCTTGCTTTT GGTGGTGCCT TTGTACAATC	2820
AGTAGTAGAC TTCGTGAAG CCTACAAATG GGTGCAGAT GGCTTGACAC TTGCAGGACG	2880
TATGCTTCCA GGTCTGGAT TTGCAATCTT GCTTCGTAC CTTCCAGTTA AACGTAACCT	2940
TCACTACCTT GCTATGGGAT TTGGTTTGAC AGCTATGTTG ACTGTTCTTT ACTCATATGT	3000
AACAGGTCTT GGTGGCGCTG TTGCTGGTAT CGTAGGTACT CTTCTGCTG AAGTTGCTGA	3060
AAAAATGGT TTCGTGAACA ACTTCAAAGG TTTGTCTATG ATTGGTATTT CTATCGTAGG	3120
TATTTTCCTT GCAGTGCTTC ACTTCAAAAA TAGCCAAAA GTAGCTGTAG CAGCACCTTC	3180
TACACCATCA GAAAGTGGG AAATCGAAGA TGACGAATTC TAATTACAAA CTTACAAAAG	3240
AAGATTTTAA TCAAATCAAC AAACGTAGCT TGTTTACTTT CCAATTAGGT TGGAACCTACG	3300
AACGTATGCA AGCTTCTGGT TACCTTTACA TGATCTTGCC TCAGTTGCGT AAAATGTATG	3360
GTGATGGAAC TCCTGAATTG AAAGAAATGA TGAAAGTTCA TACTCAATTC TTCAATACTT	3420
CACCATTTCT CCATACCATT ATCGCTGGTT TTGACCTTGC CATGGAAGAA AAAGATGGTG	3480
TAGGTTCAAA AGACCCGTT AACGGTATCA AGACAGGTTT GATGGGACCA TTCGCTCCTC	3540
TTGGGGATAC AATCTTTGGT TCACTTGTA CTGCTATCAT GGGGTCAGTC GCAGCAACTA	3600
TGGCTATCGC TGGCCAACCT TGGGGATCT TCCTTTGGAT TGCAAGTTGCA GTAGCGTATG	3660
ACATCTTCCG TTGGAACAG TTGGAATTTG CTTACAAAGA AGGGGTTAAC CTTATCAACA	3720

1088

ACATGCAAAG TACCTTGACA GCTTTGATTG ACGCTGCATC TGTACTTGGT GTCTTCATGA	3780
TGGGTGCTCT TGTAGCAACA GTGATTAACT TTGAAATTTT TTACAAGTTG CCAATCGGTG	3840
AAAAGATGAT TGATTTCCAA GACATCTTGA ACCAAATCTT CCCACGTTTG CTTCAGCAA	3900
TCTTTACTGC CTTTATCTTC TGGTTGCTTG GTAAGAAAGG TATGAACTCT ACTAAAGCTA	3960
TCGGTATTAT TATCGTACTT GCTTTGGCTC TTTCTGCCCT TGCTCACTTT GCACTTGGA	4020
TGTAATTCCT TATGACTAAA TCATTAAATTT TGGTGAGCCA TGGTCGCTTC TGTGAGGAGC	4080
TTAGAGGTAG CACAGAAATG ATTATGGGCC CACAAGACAA CATTTACACA GTAGCTCTTC	4140
TTCCAGAAGA TGGCCCAGAA GAATTTACTG CTAAATTTGA AGCTGTTATT GAAGGATTGG	4200
ATGATTTCCT AGTCTTTGCG GATCTTCTCG GTGGGACACC TTGTAATGTG GTGAGTCGCT	4260
TGATCATGGA AGGTCGTGAT ATTGACCTTT ACGCAGGGAT GAATCTTCCA ATGGTGATTG	4320
AATTTATCAA TGCAGACCTT ACAGGCGCAG ATGCGGACTA CAAGAGCCGT GCTGCAGAAA	4380
GCATTTGTGAA AGTTAATGAC CTGTTAGCGG GCTTCGATGA TGACGAAGAT GAATAATACT	4440
CTTCGAAAAT CTCTTCAAAC TACGTCAACG TCGCCTTGCC GTAGgTATAT GTTACTGACT	4500
TCGTGAGTCT TATCCGCAA CCTCAAACG GTGTTTTGAG CTGACTTCGT CAGTCTTATC	4560
CGGCAACCTC AAAGCAGTGC TTTGAGCAGC CTGCGGCTAG TTTCCTACAG ATTTTAGTTG	4620
GAACTCGATT CAATTCATGT GACAACGTGA AAATCGTTAG AGCATTTTAT ATAGAATATA	4680
CATGGGAATG TAGCTTACTC CCATTCCCAT ATTTAATAGA AAAAGAGGAA CTCAATGCTA	4740
CATTATACAA AAGAAGACTT GCTCGAATTG GGTGCAGAAA TCACTACGCG TGAATCTAC	4800
CAACAGCCTG ATGTATGGAG AGAAGCTTTT GAATTTTATC AAGCAAAACG TGAAGAAATT	4860
GCAGCCTTCC TACAAGAAAT CGCTGATAAA CATGACTATA TTAAGGTTAT CTTGACAGGT	4920
GCTGGGACTT CTGCTTATGT GGGAGATACC TTGCTACCTT ATTTTAAGGA AGTCTATGAC	4980
GAACGCAAAT GGAATTTCAA TGCTATTGCG ACAACAGATA TCGTTGCCAA TCCAGCAACC	5040
TATTTGAAAA AAGATGTGGC AACTGTCCTT GTGCTTTTTC CTCGTAGTGG GAATTCGCCT	5100
GAAAGTTTGG CGACTGTTGA TTTGGCCAAA TCCTTGTTGG ATGAGCTTTA TCAAGTGACG	5160
ATTACTTGTG CAGCAGATGG TAAATTGGCT CTTCAAGCTC ACGGTGATGA TCGTAATCTC	5220
TTGCTCTTGC AACCAGCTGT CTCTAATGAT GCTGGATTG CCATGACTTC TAGCTTTACG	5280
TCTATGATGT TGACAACTCT CTTGGTCTTT GATCCTACAG AATTTGCTGT TAAGTCTGAA	5340
CGTTTTGAAG TTGTATCTAG TCTTGCCCGT AAAGTTTTCG ACAAGGCAGA AGATGTCAAA	5400
GAGCTCGTTG ATTTAGACTT TAACCGTGTG ATCTATCTAG GCGCTGGTCC TTTCTTTGGA	5460
CTTGCTCATG AAGCTCAGCT CAAGATTTTG GAATTAACG CTGCTCAAGT TGCGACCATG	5520

1089

TATGAAAGCC CAGTTGGCTT CCGTCACGGT CCAAAATCTC TTATCAACGA CAATACAGTT	5580
GTTTGTGGTCT TTGGTACAAC GACAGACTAC ACTCGTAAGT ACGACTTGGA CTGGGTTCCG	5640
GAAGTTGCTG GTGACCAGAT TGCTCGTCGT GTTGTGCTTT TGAGTGATCA AGCTTTTGGT	5700
CTTGAAAATG TCAAAGAAGT GGCCCTTGGT TGTGGCGGTG TCTTGAAATGA TATTTACCGT	5760
GTCTTCCCTT ACATCGTTTA TGCCCAACTC TTTGCTTTAT TGACTTCACT CAAGGTAGAA	5820
AATAAACAG ATACACCGTC TCCTACAGGT ACAGTAAACC GTGTAGTACA AGGTGTCATA	5880
ATTCACGAAT ATCAAAAGTA AGACAGTGTT TATGAATTCT TGACAAGAGG ATTTGTAAT	5940
TATCAGATAA ACCATAGATT GTCAGTACGC TTTCTATGGT TTGTTTGCTT GAGAGAAATA	6000
GTAAAAGGAG AACAGAATGA AAGCATACAC AGAGCGTGTA TTTGGAAAATG TTGAGGGTGA	6060
GGATGCTCTG GCCTATCGAT TTGAGACAGA CGGTGGCTAC CAACTTGAGG TTATGACTTA	6120
TGGTGCGACT ATCTTGCGCT ATGTCGCACC TGACAAGGCT GGAAATTTTG CCAATGTTAT	6180
CTTGGGATTT GATGACTTTG ATAGTTATGT AGGCAATAGT CCCAAGCATG GAGCAAGTGT	6240
AGGTCTCTGA GCGGTCGTA TTGCAGGTGC GACCTTTGAG CTCAATGGTA AGACCTATGA	6300
CCTTGAGGTT AATAATGCTA GCAACTGTAA TCACAGTGGT TCAACTGGTT GGGATTCCAG	6360
CTTGTTTGAA GTTGAAGAAG TAAGCGATCA TGGCTTGACT CTCTACACAG AGCGTACAGA	6420
TGGGACAGGA GGGTTCCCTG GAAATCTCAA GATTGGATC AGTTATCACT TGGAAGAAAC	6480
TGGTGCCCTAT GAAATCAGCT ACAAGGTAAC GACCGATCAG GATACGCTGG TCAATCCAAC	6540
CAACCACAGC TATTTCAACT TGTCTGGTGA TTTCACGCAG ACGATTGACC GTCATGTCTT	6600
CCAACTAAAC ACAGAGGGCA TTTACTCAAT CGCTCCTGAC GGTGTTCTTG CCAAACTCC	6660
AGAAGCCAAC CGTGATGTGG TCAAACACGT CTACAATGGT ACCTTGTTGA AGGATATCTT	6720
TGCAGAAGAA GATGAGCAAA TCCAGCTGGC ATCAGGTTTG GATCATCCAT TTGCCCTTCC	6780
TGCAGGCCAT GACAATGCTG GATTCCTTTA TGACCAAAAT TCAGGTCGCT TCCTGCTTTT	6840
CAAGACAGAA GCTCCTTGCT TTGTGGTCTA CACAGCAAAC TTTGTGGATG AAAGTGTCA	6900
CATAGGAGGT CAGCCAATGC TACAGCACAA TGGGATTGCT CTTGAAGCGC AAGCTTTACC	6960
AGATGCCATT CACAGTGACC TTAAAGGCCA AGTCATTCTT AAAGCTGGTC AAACCTTCAC	7020
CAGTAAGACA CGTTATGAAC TTGTTGTGAA GTAAAAGAGT CATTGCGCCT ACTTTTGGGA	7080
GCTAGGAATA GGTACGCAGA GACAAATAGT AGGAAAATAT GATATAACTA AGCGTTGAAA	7140
GCTATCTGTT AATATAATAT TCAAATAACA ATAAGGAGTA AGAAAGAAAC GAAGAAAATT	7200
GTATTTGCTA GTGCCTTGGC TTTGACCTTG GCTGGAGCAG TTTTGACAAA TGATGTTTTT	7260

1090

GCGAACGACA GACTTGTGGC AACACAACT ACTGATGGTA AAAATGAAA TGTATTGACC	7320
TCAGAGGTGC TAAAACCTTC TAGTGGCAAT GTTTGGGTG GAATCAAAG AGAATTTGTG	7380
GCTCCTCATC AACAACTCTAT TTTGGATGCC ATCAATGCTA TCTGTAAAGA AGCGGCTGAC	7440
GAAGGTTTGG TAGATAAGTA TGTCCTATC AAATGATCAA CTGACCTAGA AAAGGCAGCT	7500
TTTGCCAGAG CTACAGAAGC ATCTATAACC ATGGATCATA CCCGTCTTTC TAGCAAAGAT	7560
CTTTGGAGTG CCTTTCACAC TTCTAATAGT ATAATGGGAG AAAATTGGC ATGGAATCAT	7620
GACGGTTTTTC TAAAAGCTAT TGAACAATGG CGTGTGAAA AAGCAGATTA TGTGGAGAAA	7680
AAAATAGTGG TTCAGACAAC GGGAAATCTG GTCACATGA GTCGCTAATT AACCCATAAT	7740
TTACACACAT GGGGATGGCA GCTTTTAAAA ATCCTAACAA TCAATACAAA GCTATTACAA	7800
TTGCTCAAAC TCTAGGTGAT GATGCTTCTT CAGAGGAATT GGCTGGTAGA TATGGTTCTG	7860
CTGTTCAAGT TACAGAAGTG ACTGCCTCAA ACCTTTCAAC AGTTAAACT AAAGCTACGG	7920
TTGTAGAAAA ACCACTGAAA GATTTTAGAG CGTCTACGTC TGATCAGTCT GGTGGGTGG	7980
AATCTAATCG TAAATGGTAT TTCTATGAGT CTGGTGATGT GAAGACAGGT TGGGTGAAAA	8040
CAGATGGTAA ATGGTACTAT TTGAATGACT TAGGTGTCAT GCAGACTGGA TTGTGAAAA	8100
TTTCTGGTAG CTGGTATTAC TTGAGCAATT CAGGTGCTAT GTTTACAGGC TGGGGAACAG	8160
ATGGTAGCAG ATGGTTCTAC TTTGACGGCT CAGGAGCTAT GAAGACAGGC TGGTACAAGG	8220
AAAATGGCAC TTGGTATTAC CTTGACGAAG CAGGTATCAT GAAGACAGGT TGTTTAAAG	8280
TCGGACCACA CTGGTACTAT GCCTACGGTT CAGGAGCTTT GGCTGTGAGC ACAACAACAC	8340
CAGATGGTTA CCGTGTAAT GGTAAATGGT AATGGGTAAA CTAGGCTCAG GCCATAGGTA	8400
AAGCATTATC CTTACTTAGC AAAAAGAATG AACGATAAGA AAGAGGTGTA TGGCGAACAT	8460
TGGCCTCTTT TGATTATATA AGATTGGATT CTTGTGCGCT CAATTTCAGA CTTTCTATT	8520
GTAAGCTAAT ATTTTATAGC CCATTAAAAG CATAAGCGGT AATCTAATTT AAAAAATGCT	8580
GTAATTAGTC TGAAGTCCAC ACTTACTTGT TGAGATGTTA TCTCTGTTT TTATCGTTA	8640
AATTTACTGT ATTTTTTATA GTATGCAGAA TATTTTAAAG TATATTCAA TAGAAATTT	8700
TATCGATTTA TTGTATAATG ATAAGTAATT GTTGAAAAGT ACTCAGAAAA TTCCATACTA	8760
TATTATTTTT ATGTTTATAC TTTTATGCTA TAAAATATAG ATTGATATAA AGAATATAGA	8820
AAAAGCGAGG TTAAATATGAG CCGAAAAAGC ATTGGTGAGA AACGCCATAG TTTCTCGATG	8880
AGAAAGTTGT CAGTGGGATT GGTATCAGTT ACTGTATCTA GTTTCTTTTT GATGAGTCAA	8940
GGGATTCAAT CCGTATCGGC CGATAATATG GAAAGTCCAA TTCATTATAA GTATATGACC	9000
GAGGTAAT TGACAGACGA GAAAAATCC TTGCTGCTAG AGGCCCTTCC ACAACTGGCT	9060

1091

GAAGAATCAG ATGATACTTA TTACTTGGTT TATAGATCTC AACAGTTTTT ACCGAATACA	9120
GGTTTTTAACC CAACTGTTGG TACTTTCCTT TTTACTGCAG GATTGACCTT GTTAGTTTTA	9180
TTGGTTTCTA AAAGGGAAAA TGGAAAGAAA CGACTTGTTT ATTTTCTGCT GTTGACTAGC	9240
ATGGGAGTTC AATTGTTGCC GGCCAGTGCT TTTGGGTTGA CCAGCCAGAT TTTATCTGCC	9300
TATAATAGTC AGCTTTCTAT CGGAGTCGGG GAACATTTAC CAGAGCCTCT GAAAATCGAA	9360
GGTTATCAAT ATATTGGTTA TATCAAACT AAGAAACAGG ATAATACAGA GCTTTCAAGG	9420
ACAGTTGATG GGAATACTC TGCTCAAAGA GATAGTCAAC CAACTCTAC AAAACATCA	9480
GATGTAGTTC ATTCAGCTGA TTTAGAATGG AACCAAGGAC AGGGGAAGGT TAGTTTACAA	9540
GGTGAAGCAT CAGGGGATGA TGGACTTTCA GAAAAATCTT CTATAGCAGC AGACAATCTA	9600
TCTTCTAATG ATTCATTCGC AAGTCAAGTT GAGCAGAATC CGGATCACA AGGAGAATCT	9660
GTAGTTCGAC CAACAGTGCC AGAACAAGGA AATCCTGTGT CTGCTACAAC GGTGCAGAGT	9720
GCGGAAGAGG AAGTATTGGC GACGACAAAT GATCGACCAG AGTATAAACT TCCATTGGAA	9780
ACCAAAGGCA CGCAAGAACC CGGTCATGAG GGTGAAGCCG CAGTCCGTGA AGACTTACCA	9840
GTCTACACTA AGCCACTAGA AACCAAAGGT ACACAAGGAC CCGGACATGA AGGTGAAGCT	9900
GCAGTTCGCG AGGAAGAACC AGCTTACACA GAACCGTTAG CAACGAAAG CACGCAAGAG	9960
CCAGGTCATG AGGGCAAAGC TACAGTCCGC GAAGAGACTC TAGAGTACAC GGAACCGGTA	10020
GCGACAAAAG GCACACAAGA ACCCGAACAT GAGGGCGAAG CCGCAGTAGA AGAAGAACTT	10080
CCGGCTTTAG AGGTCACTAC ACGAAATAGA ACGGAAATCC AGAATATTCC TTATACAACA	10140
GAAGAAATTC AGGATCCAAC ACTTCTGAAA AATCGTCGTA AGATTGAACG ACAAGGGCAA	10200
GCAGGGACAC GTACAATTCA ATATGAAGAC TACATCGTAA ATGGTAATGT CGTAGAACT	10260
AAAGAAGTGT CACGAAGTGA AGTAGCTCCG GTCAACGAAG TCGTTAAAGT AGGAACACTT	10320
GTGAAAGTTA AACCTACAGT AGAAATTACA AACTTAACAA AAGTTGAGAA CAAAAATCT	10380
ATAACTGTAA GTTATAACTT AATAGACACT ACCTCAGCAT ATGTTTCTGC AAAACGCAA	10440
GTTTTCCATG GAGACAAGCT AGTTAAAGAG GTGGATATAG AAAATCCTGC CAAAGAGCAA	10500
GTAATATCAG GTTTAGATTA CTACACACCG TATACAGTTA AAACACACCT AACTTATAAT	10560
TTGGGTGAAA ATAATGAGGA AAATACTGAA ACATCAACTC AAGATTTCCT ATTAGAGTAT	10620
AAGAAAATAG AGATTAAAGA TATTGATTCA GTAGAATTAT ACGGTAAAGA AAATGATCGT	10680
TATCGTAGAT ATTTAAGTCT AAGTGAAGCG CCGACTGATA CGGCTAAATA CTTTGTAATA	10740
GTGAAATCAG ATCGCTTCAA AGAAATGTAC CTACCTGTAA AATCTATTAC AGAAAATACG	10800

1092

GATGGAACGT ATAAAGTGAC GGTAGCCGTT GATCAACTTG TCGAAGAAGG TACAGACGGT	10860
TACAAAGATG ATTACACATT TACTGTAGCT AAATCTAAAG CAGAGCAACC AGGAGTTTAC	10920
ACATCCTTTA AACAGCTGGT AACAGCCATG CAAAGCAATC TGTCTGGTGT CTATACATTG	10980
GCTTCAGATA TGACCGCAGA TGAGGTGAGC TTAGGCGATA AGCAGACAAG TTATCTCACA	11040
GGTGCATTTA CAGGGAGCTT GATCGGTTCT GATGGAACAA AATCGTATGC CATTTATGAT	11100
TTGAAGAAAC CATTATTTGA TACATTAAAT GGTGCTACAG TTAGAGATTT GGATATTAAA	11160
ACTGTTTCTG CTGATAGTAA AGAAAATGTC GCAGCGCTGG CGAAGGCAGC GAATAGCGCG	11220
AATATTAATA ATGTTGCAGT AGAAGGAAAA ATCTCAGGTG CGAAATCTGT TGCGGGATTA	11280
GTAGCGAGCG CAACAAATAC AGTGATAGAA AACAGCTCGT TTACAGGGAA ACTTATCGCA	11340
AATCACCAGG ACAGTAATAA AAATGATACT GGAGGAATAG TAGGTAATAT AACAGGAAAT	11400
AGTTCGAGAG TTAATAAAGT TAGGGTAGAT GCCTTAATCT CTACTAATGC ACGCAATAAT	11460
AACCAAACAG CTGGAGGGAT AGTAGGTAGA TTAGAAAAATG GTGCATTGAT ATCTAATTCG	11520
GTTGCTACTG GAGAAATACG AAATGGTCAA GCATATTCTA GAGTCGGAGG AATAGTAGGA	11580
TCTACGTGGC AAAACGGTCG AGTAAATAAT GTTGTGAGTA ACGTAGATGT TGGAGATGGT	11640
TATGTTATCA CCGGTGATCA ATACGCAGCA GCAGATGTGA AAAATGCAAG TACATCAGTT	11700
GATAATAGAA AAGCAGACAG ATTGCTTACA AAATTATCAA AAGACCAAAT AGACGCGAAA	11760
GTTGCTGATT ATGGAATCAC AGTAACTCTT GATGATACTG GGCAAGATTT AAAACGTAAT	11820
CTAAGAGAAG TTGATTATAC AAGACTAAAT AAAGCAGAAG CTGAAAAGAA AGTAGCTTAT	11880
AGCAACATAG AAAAACTGAT GCCATTCTAC AATAAAGACC TAGTAGTTCA CTATGGTAAAC	11940
AAAGTAGCGA CAACAGATAA ACTTTACACT ACAGAATTGT TAGATGTTGT GCCGATGAAA	12000
GATGATGAAG TAGTAACGGA TATTAATAAT AAGAAAAATT CAATAAATAA AGTTATGTTA	12060
CATTTCAAAG ATAATACAGT AGAATACCTA GATGTAACAT TCAAAGAAAA CTTCATAAAC	12120
AGTCAAGTAA TCGAATACAA TGTTACAGGA AAAGAATATA TATTCACACC AGAAGCATTT	12180
GTTTCAGACT ATACAGCGAT AACGAATAAC GTACTAAGCG ACTTGCAAAA TGTAACACTT	12240
AACTCAGAAG CTACTAAAAA AGTACTAGGA GCAGCGAATG ATGCAGCCTT AGATAACCTA	12300
TACTTACATA GACAATTGA AGAAGTTAAA GCTAATATAG CAGAACACCT AAGAAAAGTA	12360
TTAGCGATGG ATAAATCAAT CAATACTACA GGAGACGGTG TAGTTGAATA CGTAAGTGAG	12420
AAAATCAAAA ATAACAAAGA AGCATTTATG CTAGGTCTTA CTTATATGAA CCGTTGGTAC	12480
GATATTAATT ATGGTAAAAT GAATACAAAA GATTTATCTA CGTACAAGTT TGACTTTAAC	12540
GGAAATAATG AGACTTCAAC GTTGATACT ATTGTCGCAT TAGGAAATAG TGGACTAGAT	12600

1093

AACCTGAGAG CTTCAAATAC TGTAGGTTTA TATGCGAATA AACTTGCATC GGTAAAAGGA	12660
GAAGATTCAG TCTTTGACTT CGTAGAAGCG TATAGAAAAC TGTTCCTTACC AAACAAAACA	12720
AATAACGAGT GGTTTAAAGA AAATACAAAG GCATATATAG TCGAAATGAA GTCTGATATT	12780
GCAGAAGTAC GAGAAAAACA AGAATCACCA ACAGCCGATA GAAAAATTC ATTAGGAGTT	12840
TACGATAGAA TATCAGCACC AAGTTGGGGG CATAAGAGTA TGTATATTACC ACTACTAACT	12900
TTACCTGAAG AATCTGTGTA TATTTTCATCG AATATGTCTA CACTTGCATT CGGTTCGTAT	12960
GAAAGATATC GTGATAGTGT GGATGGAGTT ATTCTTTTCTAG GAGATGCTTT ACGAACTTAT	13020
GTAAGAAATA GAGTTGATAT AGCAGCGAAA AGGCATAGAG ACCATTATGA TATTTGGTAC	13080
AATCTTCTTG ACAGTGCTTC AAAAGAAAAA CTTTTCCTGT CTGTGATAGT TTATGATGGA	13140
TTCAATGTAA AAGATGAGAC AGGAAGAACT TATTGGGCAA GGTTAACGGA TAAAAACATC	13200
GGCTCTATTA AAGAATTCCT CGGACCTGTT GGGAAATGGT ATGAGTATAA TAGTAGTGCA	13260
GGAGCGTATG CGyAtGGAAG TTAAACGCAC TTTGTGTAG ATAGATTATT AGATGCTTAT	13320
GGAACGTCGG TTTATACTCA TGAAATGGTT CATAATTCTG ATTCTGCAAT CTACTTTGAA	13380
GGAAATGGTA GACGTGAAGG ATTGGGAGCG GAGTTATACG CACTTGGTTT ACTGCAATCT	13440
GTAGATAGTG TAAATTCTCA TATTTTAGCT TTAAATACGT TATATAAAGC AGAAAAAGAT	13500
GATTTGAATA GATTGCATAC ATATAATCCG GTGGAACGTT TCGATTCCGA TGAGGCGCTT	13560
CAAAGTTATA TGCATGGATC ATATGATGTA ATGTATACAC TTGATGCGAT GGAAGCAAAA	13620
GCGATATTAG CTCAAAATAA TGATGTTAAG AAAAAATGGT TTAGAAAAAT AGAAAATTAT	13680
TACGTTCGTG ATACTAGACA TAATAAAGAT ACACATGCAG GAAATAAAGT CCGTCCATTA	13740
ACAGATGAAG AAGTAGCTAA CTTAACATCG TTAAACTCAT TAATCGACAA CGACATCATA	13800
AATAGACGTA GCTATGATGA TAGTAGAGAA TATAAACGAA ATGGCTACTA TACTATAAGT	13860
ATGTTCTCTC CTGTATACGC AGCGCTAAGC AATTCGAAAG GTGCTCCTGG AGATATTATG	13920
TTTAGAAAAA TAGCTTATGA ATTACTTGCG GAAAAAGGTT ATCACAAAGG ATTCCTACCT	13980
TATGTTTCTA ATCAGTACGG AGCAGAAGCA TTTGCCAGCG GAAGCAAAAC ATTCTCATCA	14040
TGGCATGGAA GAGATGTTGC TTTAGTGACA GATGATTTAG TATTTAAGAA AGTATTCAAT	14100
GGTGAGTACT CATCATGGGC TGATTTCAAA AAAGCAATGT TTAAACAACG TATAGATAAA	14160
CAAGATAATC TGAAACCAAT AACAAATCAA TACGAATTAG GTAATCCTAA TAGTACAAAA	14220
GAAGTAACATA TAACAACGGC TGCACAAATG CAACAATTAA TTAATGAAGC GGCTGCGAAA	14280
GATATTACTA ATATAGATCG TGCAACGAGT CATACCCAG CAAGTGGGT GCATTTATTA	14340

1094

AAACAAAAA TCTATAATGC ATATCTTCGC ACTACAGATG ACTTTAGAAA TTCTATATAT	14400
AAATAAGATT GTAGAGTTTC ATTGTTGAGT AGTGTTCCTT GTAAGGATGA GGAGTCAGAT	14460
GACAAATCGA CTCCTTTTTC TTATGGATCG ATGTAGAGAT TTGATTGAAT GCAGATTGCA	14520
GGAATCATCT TCAACTCATC AACGACCAAT GGTGACAAGG TGGATTTCAA TCCCACAGAA	14580
AATGTTGATT TGAGAAATAA CTTTGCTAGT CTAGTAAAAT AAATACAAAA CAATCCTAGA	14640
AGATTTTTTC TGGGATTGTT TTTTGCTGAG TGGGATGCTT CAAGTTGTCT GGCTTGACTT	14700
TCTTGAGGGA AGTTATATAA TAGTTGTAAT AATTAG	14736

(2) INFORMATION FOR SEQ ID NO: 172:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11770 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

ACAGGAAAGC ACGATAGCAA TCTCTTTGGA AGATTTAAAA AATATTCCTC AAAGTTTCGC	50
TGTTGCTTAC GGTGATACGA AAGTATCTTC GATTCTCTCT GTCTTCCGTG CTAATTTAGT	120
AAATCATTTG ATTACAGACA AAAATACAAT TTTAAAAGTT TTGGAAGAAG ATGGGGATTT	180
GACTTTTAGA GAGATTCTAG GTGAGTGAAA ATGATAGACT GATTCAGTTT ATCGTTTTTC	240
TTTTTAGTTG ATTGCACATT TGTGCTTATA TAAACAAAA TAGTTTATCT GTTGTTTTTG	300
GATTGACAAC TTTATTATGT AGTTGTATTC TATAGTTACA AAAGAAAATT TTTAAATTTT	360
AAATGAAAA AGCTTTTTAC ATAGTGAAAT GAGGAGGAAT TTATGGAAAT GATTGTTCCA	420
GATCAAATTA TCATGGGTTT AATTTTATAT GCTGGTGATG CGAAACAACA TATTTATAAA	480
GCGTTAGATT ACATAAAAAA TGGTACATGT GAACGGTGTG AAGAAGAAAT ACAGTTAGCT	540
GATGCAGCCT TATTAGAAGC TCATAATCTA CAAACAAAAT TTTTGGCACA GGAAGCGTCT	600
GGTACAAAGA CAGAAATTAC AGCTCTCTTT GTTCATTAC AAGATCATCT CATGACCAGT	660
ATGACGGAGA TTAATTTAAT CAAAGAAAT ATTAGTTTGA GAAAAGAACT TCATAAAAAA	720
TAATACTAGA GTATTATCAT TGTATTAAAC ATAGAGGAGG AAAACATAAT GGTGAAGATT	780
GGTTTGTTTT GTGCAGCAGG TTTTCTACT GGTATGCTTG TAAATAATAT GAAAATTGCA	840
GCGCAATCTA GTGGAGTTGA GGCAGAAATA GAGGCGTTTT CTCAGTCTAA ATTAGCGGAT	900
TATGCGCCAA ATATAGATGT TGCACTATTG GGICCAACAG TTGCTTATAC ATTAGATAAA	960
TCAAAAGAAA TTTGTGATAA GTGTGATGTT CCGATAGCTG TTATTCGGAT GATGGACTAT	1020

1095

GGTATGTTAG ATGGGAAAAA AGTATTAGAT TTGGCCCTAT CTTTGATTAG TGGGTAAGAA	1080
AAGGAGATTT ATTATGTCAA AGATGGATGT TCAGAAAAATC ATTGCACCGA TGATGAAGTT	1140
TGTGAATATG CGTGGCATTG TAGCTCTAAA AGATGGGATG TTAGCAATTT TGCCATTGAC	1200
AGTAGTTGGT AGTTTGTCTT TGATTATGGG ACAATTGCCG TTCGAAGGAT TAAATAAGAG	1260
CATTGCTAGT GTTTTGGAG CTAATTGGAC AGAGCCGTTT ATGCAAGTAT ATTCAGGAAC	1320
TTTTGCTATT ATGGGTCTAA TTTCTTGTTT TTCAATTGCC TATTCTTATG CTAAGAATAG	1380
CGGAGTAGAG GCTTTACCAG CTGGAGTTCT ATCTGTATCT GCATTCCTTA TTTTGCTAAG	1440
ATCATCTTAT ATCCCTAAAC AAGGTGAGGC GATTGGGGAC GCTATTAGTA AAGTTTGGTT	1500
TGGAGGCCAA GGAATTATCG GTGCTATCAT TATAGGTTTG GTAGTAGGAA GTATTTATAC	1560
CTTCTTTATA AAGAGAAAAA TTGTTATTAA GATGCCAGAA CAAGTCCAC AAGCTATTGC	1620
CAACAGTTT GAAGCAATGA TTCCAGCATT TGAATTTTC TTATCTTCTA TGATTGTATA	1680
TATTTTAGCG AAGTCATTGA CTAATGGCGG AACATTCATA GAAATGATTT ATTCTGCTAT	1740
TCAAGTCCG TTGCAAGGTT TAACTGGATC TTTGTATGGT GCTATTGGAA TTGCATTCTT	1800
TATATCATTT TTGTGGTGGT TTGGTGTTCG TGGGCAATCG GTAGTAAATG GAGTAGTGAC	1860
AGCTCTGCTT TTATCTAATC TTGATGCTAA TAAAGCTATG TTAGCCTCTG CTAATCTATC	1920
ATTAGAAAAA GGTGCACATA TTGTTACTCA ACAATTTTTA GATTCATTTT TAATCTATC	1980
AGGTTACGGG ATTACGTTTG GTCTTGAGT TGCCATGCTT TTTGCAGCAA AATCAAAACA	2040
ATACCAAGCC TTAGGAAAAG TTGCAGCTTT TCCAGCAATA TTTAACGTAA ATGAGCCAGT	2100
TGTATTTGGA TTCCCGATTG TCATGAATCC AGTTATGTTT GTACCTTTCA TTCTTGTTCC	2160
TGTAATTGCA GCTGTGATAG TATATGGAGC TATTGCAACA GGTTCATGC AGCCATTCTC	2220
AGGGGTAACA TTGCCTTGGA GTACACCAGC TATTTTATCA GGATTTTGGG TGGGTGGATG	2280
GCAAGGAGTT ATTACTCAGC TGGTGATATT AGCGATGTCT ACATTTGGTTT ATTTTCCATT	2340
CTTTAAAGTA CAGGATCGTT TAGCTTACCA AAATGAAATC AAACAATCTT AGAGGTATTT	2400
GTGTGTTACT GTTAAACTCA CACATTTGTG CTAATAATTA GAGAGTTAAA ATTTTCTAG	2460
TTAAAAGCTT GAAAATTCTT ATAAAAATCG GTATTATATT TTCGAAAGAA ATAAAAATAT	2520
TTTCGAAAGA AAGGTGCTTA CGATGGTAAA TACAGAAGTA GCAAGAACAA CAATCAAGAC	2580
AGAATATTTT GGCAGCCTTA CTGAAAGGAT GAACAAATAT CGAGAAGATG TTTTAAATAA	2640
AAAACCTTAT ATTGATGCTG AGAGAGCAGT TCTAGCAACA CGCGCCTATG AACGATACAA	2700
GGAACAACCT AATGTCCTAA AACGTGCATA TATGCTGAAA GAAATTTTGG AAAATATGAC	2760

1096					
TATCTATATT	GAAGAAGAAT	CTATGATTGC	GGGAAATCAA	GCTTCTTCCA	ATAAAGATGC 2820
TCCTATTTTT	CCGGAATATA	CGCTAGAATT	TGTTCTCAAT	GAGTTGGATC	TTTTTGAAAA 2880
GCCTGATGGA	GATGTTTTCT	ATATTACAGA	AGAAACAAAA	GAACAACTTA	GAAGTATTGC 2940
TCCGTTTTGG	GAAAAAATA	ATTTACGTGC	TAGAGCTGGT	GCCTTATTAC	CTGAAGAAGT 3000
CTCTGTTTAT	ATGCAAACAG	GATTCCTCGG	TATGGAAGGT	AAGATGAATT	CTGGAGATGC 3060
TCACCTAGCA	GTTAACTATC	AGAACTTTT	GCAATTTGGT	TTAAGAGGTT	TTGAAGAGCG 3120
GGCTCGTAAA	GCAAAAGTAG	CTCTAGATTT	AACAGATCCA	GCAAGTATTG	ATAAATATCA 3180
TTTTTACGAC	TCTATATTTA	TCGTAATCGA	TGCTATTAAA	GTATATGCAA	AGCGCTTTGT 3240
TGCTCTTGCT	AAAAGTTTAG	CCGAAAATGC	AAATCCTAAA	CGTAAGAAAG	AATTACTTGA 3300
GATTGCAGAT	ATTTGCTCTA	GAGTCCCATA	TGAACCGGCA	ACTACTTTTG	CAGAAGCTAT 3360
TCAATCAGTT	TGGTTTATTC	AATGTATTTT	ACAAATTGAA	TCTAATGGCC	ACTCTCTTTC 3420
ATATGGCCGT	TTTGATCAAT	ATATGTATCC	ATATATGAAG	GCTGATTTAG	AAAGTGGTAA 3480
AGAAACAGAA	GATAGCATTG	TTGAACGTCT	GACAAATCTT	TGGATTAAAG	CAATTACAAT 3540
TAATAAGGTT	CGCAGTCAAT	CACATACATT	TTCTTCAGCA	GGAAGTCCTT	TATATCAAAA 3600
TGTTACAATT	GGTGGACAGA	CTCGAGATAA	GAAGGATGCT	GTTAACCCAT	TATCTTATTT 3660
GGTATTAAAA	TCAGTTGCAC	AAACCCATCT	ACCGCAACCT	AATCTAACTG	TACGTTACCA 3720
TGCGGTTTA	GATGCTCGTT	TCATGAATGA	GTGTATTGAA	GTGATGAAAC	TTGGTTTTGG 3780
TATGCCCTGA	TTTAATAATG	ATGAGATTAT	TATTCCTTCT	TTTATTGCAA	AAGGAGTATT 3840
GGAAGATGAT	GCTTATGATT	ACAGTGCCAT	TGGATGTGTT	GAAACGGCAG	TTCCAGGGAA 3900
ATGGGGCTAT	CGTTGCACAG	GTATGAGTTA	TATGAACTTC	CCTAAGGTTT	TACTTATCAC 3960
GATGAATGAT	GGAATTGATC	CGGCTTCGGG	TAAACGGTTT	GCACCAAGCT	TTGGTCGTTT 4020
TAAGGATATG	AAGAACTTTT	CTGAATTAGA	AAATGCTTGG	GATAAAACAC	TAAGATATTT 4080
GACACGAATG	AGTGTTATTG	TTGAAAATTC	TATTGATTTA	TCATTGGAAC	GAGAAGTTCC 4140
TGATATTCTA	TGTTTCAGCAT	TGACTGATGA	TTGTATTGGT	CGTGGAAAAC	ACCTTAAAGA 4200
AGGTGGAGCA	GTATATGATT	ATATATCAGG	ATTGCAACTT	GGAATTGCAA	ATTTGTGCGA 4260
TTCATTAGCT	GCAATTAAAA	AATTGGTGTT	TGAGGAAGAA	CGTATAAGCC	CAAGTCAGCT 4320
TTGGCATGCA	CTGGAAACAG	ATTATGCCGG	AGAAGAAGGT	AAGGTCATT	AAGAAATGTT 4380
GATTCATGAT	GCACCTAAGT	ATGGTAATGA	TGATGATTAT	GCTGACAAAT	TGGTTACTGC 4440
TGCTTATGAC	ATTTATGTTG	ATGAAATTGC	TAAATATCCT	AATACACGTT	ATGGAAGAGG 4500
GCCTATTGGA	GGAATTCGTT	ATTCAGGAAC	ATCTTCTATC	TCAGCCAACG	TAGGGCAGGG 4560

1097

ACGTGGAACA TTAGCAACTC CAGATGGACG CAACGCGGGT ACACCGTTAG CAGAGGGTTG	4620
TTCACCATCA CATAATATGG ATCAACACGG CCCTACATCT GTTTTAAAAT CTGTTTCAAA	4680
ATTACCAACA GATGAAATCG TAGGTGGGGT TCTCTTAAAT CAGAAAGTAA ATCCTCAAAC	4740
GTTAGCCAAA GAAGAAGATA AATTAAAAC TATTGCTTTG TTACGAACAT TCTTTAATCG	4800
TTTACATGGG TACCATATTC AATACAATGT TGTTCCTAGA GAGACGCTGA TTGACGCTCA	4860
GAAACATCCT GAAAAACACA GAGACTTAAT TGTTCGTGTT GCAGGATACT CTGCATTCTT	4920
CAATGTTCTT TCTAAGGCAA CCCAAGATGA CATTATAGGA CGTACTGAGC ATACTTTGTA	4980
AAATAAAGAG GTTCTTTTTA TGGAAATTAT GCTTGACACA TTAAATTTAG ATGAGATTAA	5040
AAAGTGGTCT GAAATTTTGC CGCTAGCTGG GGTAACCTCA AATCCCCTA TTGCAAAAAG	5100
AGAGGGTTCT ATTAATTTTT TTGAACGAAT CAAAGATGTA AGAGAATTGA TTGGCTCTAC	5160
ACCCCTCTAT CATGTTTCTG TGATTTCTCA AGATTTTGAA GGCATCTTAA AGGATGCTCA	5220
TAAATTCGA AGACAAGCAG GAGATGATAT ATTTATCAA GTACCTGTTA CTCCAGCTGG	5280
ATTACGTGCA ATAAAGGCGC TAAAAAAGA GGGCTACCAT ATCACTGCAA CAGCTATTTA	5340
TACAGTTATT CAGGGATTAT TAGCTATCGA AGCAGGAGCG GATTACCTAG CTCCATATTA	5400
TAATAGAATG GAAATCTGA ACATTGATTC AAATCTGTC ATTCGTCAAT TAGCTCTTGC	5460
TATTGATAGA CAGAACTCTC CTAGTAAGAT TTTAGCTGCA TCCTTTAAAA ATGTAGCACA	5520
AGTAAATAAT GCTTTAGCTG CAGGTGCGCA TGCTGTTACA GCAGGAGCGG ATGTTTTTGA	5580
ATCAGCTTTC GCCATGCCAT CTATCCAAAA GCGGTTGAT GATTTTCTG ACGATTGGTT	5640
TGTTATTCAA AATAGTCGTT CCATTTAGAT AGAGAGGAAA TACATATGAG AATTTTGTCT	5700
AGTCCTTCTA GATATATTCA GGGGAAAAT GCCTTGTTG AAAATGCCAA ATCAATTTTG	5760
GATTTGGGAA ATTGCCCTAT TCTATTATGC GATCAGTTGG TTTATGATAT TGTGGAAGA	5820
CGATTTGAAG ATTACCTACA TAGGTATGGT TTCCATATTG TTCTGGCGCT ATTTAATGGT	5880
GAAGCTTCTG ACAATGAAAT CAATCGAGTT GTTGCCTTGG CTGAGAAAGA AAATGTGAT	5940
AGTATTATCG GTCTTGCTGG GGGAAAGACG ATTGATAGCG CAAAAGCTAT TGCAGATTG	6000
ATTGAAAAGC CTGTTATTAT TGCTCCAACA ATTGCATCGA CCGACGCACC TGTATCTGCT	6060
TTATCTGTTA TTTATACAGA TGAAGGTGCA TTTGATCATT ATCTATTTTA TTCTAAAAAT	6120
CCAGATTTAG TTTGGTTGA TACAAAAGTT ATTTACAAG CCCCTAAGCG TTTATTAGCG	6180
TCTGGTATTG CAGATGGTTT AGCAACTTGG GTTGAGGCGC GTGCGGTTAT GCAGGCAAA	6240
GGAAAACTA TGTGGGACA ACAGCAAACA TTGGCTGGAG TTGCAATTGC GAAGAAATGT	6300

1098

GAAGAAACGC TGTTCGAGA TGGTTTACAG GCTATGGCAG CTTGTGAAGC TAAAGTGGTG	6360
ACACCAGCAT TAGAAAATAT TGTGAAGCT AATACTTTAT TGAGTGGTCT AGGTTTGA	6420
AGTGGAGGAT TAGCTGCGGC GCATGCAATT CATAATGGTT TTACTGCATT GACAGGTGAC	6480
ATTCATCATT TAACACATGG TGAAGAGTA GCTTATGGAA CTTTAGTACA ACTATTATTG	6540
GAAATAGAC CTAAAGAAGA ACTTGATAAG TATATTGAGT TTTACAAAA AATTGGTATG	6600
CCAACAACTC TAAAGAAAT GCATTTGGAT CAAGTTGGAT ATGATGATTT AATAAAGTT	6660
GGTAAACAAG CAACTATGGA GGGTGAGACA ATTCATCAGA TGCCGTTTAA GATTTGCGCT	6720
TCAGATGTTG CTCAGCTAT TATCGCTGTA GATGCCTATG TAAATTCAAA ATAAACAATA	6780
AGGACTACTG TTTCCAAAT GGTAGTCTTT TATTGATCCC TGTATTGAAT TCTATAGAAG	6840
ATTGAAATAG GATGAGAACA AATCGATTGG GAAAGTAAAA TTAATTCTTA TAAATGTTTT	6900
AGCAATTGTT TCGTACTATT TCAGATTCAG TCTACTATAT GTTCTTCATA AATCAAAAAG	6960
CGACATAGGT TGTCGGCTAT TTATTGTGAA TACATTAATT AGCATTCAG TTTTATCTTC	7020
GGTCTAAAAT AAGTATTTTG TGCTATACGA GATAAGCTTC TTGACTTACT CCTTGATTTA	7080
CTGCATAACA ATGGGATAAA AAGTGGGAGA TAGAGCAATT CATAGTCATC AAAATTAATG	7140
AGATACAGTA TACAGTTTTT CCTTTAAACA CATTTCAAAT TCCCTCAAAA ATGGTATAAT	7200
AGTAACATCA CAAAATTGGA GAGAGACCAT GAGTTTTTAC AATCATAAAG AAATTGAGCC	7260
TAAGTGGCAG GGCTACTGGG CAGAACATCA TACATTTAAG ACAGGAACAG ATACATCAA	7320
ACCTAAGTTT TATGCGCTTG ATATGTTCCC TTATCCGTCT GGAGCTGGTC TGCACGTAGG	7380
ACACCCAGAA GGTATACTG CAACCGATAT CCTCAGTCGT TACAAACGTG CGCAAGGCTA	7440
CAATGTCCCT CACCCAATGG GTTGGGATGC TTTTGGTTTG CCTGCAGAGC AATACGCTAT	7500
GGATACTGGT AATGACCCAG CAGAATTAC AGCGGAAAAC ATTGCCAACT TCAAACGTCA	7560
AATTAATGCG CTGGATTTT CTTATGACTG GGATCGTGAA GTCAACACAA CAGATCCAAA	7620
CTACTACAAG TGGACTCAAT GGATTTTCAC CAAGCTTTAC GAAAAAGGCT TGGCCTATCA	7680
AGCTGAAGTG CCAGTAACT GGGTTGAGGA ATTGGGAAT GCCATTGCCA ATGAAGAAGT	7740
GCTTCCTGAC GGAACCTCTG AGCGTGGAGG CTATCCAGTT GTCCGCAAAC CAATGCGCCA	7800
ATGGATGCTC AAAATCACGG CTTACGCAGA GCGCTTGCTC AATGACTTAG ATGAAC TAGA	7860
TTGGTCAGAG TCTATCAAG ATATGCAACG CAACTGGATT GGTAAATCAA CTGGTGCCAA	7920
TGTAACCTTC AAAGTAAAAG GAACAGACAA GGAATTTACA GTCTTTACTA CTCGTCCGGA	7980
CACACTTTTC GGTGCGACTT TCACTGTCTT GGCTCCTGAA CATGAATTAG TAGACGCTAT	8040
CACAAGTTCA GAGCAAGCAG AAGCTGTAGC AGACTATAAA CACCAAGCCA GCCTTAAGTC	8100

1099

TGACTTGGCT CGTACAGACC TTGCTAAAGA AAAACAGGG GTTTGGACTG GTGCTTATGC	8160
CATCAACCCCT GTCAATGGTA AGGAAATGCC AATCTGGATT GCAGACTATG TCCTTGCTAG	8220
TTATGGAACA GGTGCGGTTA TGGCTGTGCC TGCCCACGAC CAACGTGACT GGGAAATTGC	8280
CAACAATTT GACCTTCCAA TCGTCGAAGT ACTTGAAGGT GGAAATGTCG AAGAAGCTGC	8340
CTACACAGAG GATGGCCTGC ATGTCAATTC AGACTTCCTA GATGGATTGA ACAAAGAAGA	8400
CGCTATTGCC AAGATTGTGG CTGCGTTGGA AGAAAAAGGC TGTGGTCAGG AGAAGGTTAC	8460
CTACCGTCTC CGCGACTGGC TCTTTAGCCG TCAACGTTAC TGGGGTGAGC CAATTCCAAT	8520
CATTCAATTGG GAAGATGGAA CTTCAACAGC TGTTCCTGAA ACTGAATTGC CGCTTGCTTT	8580
GCCTGTAACC AAGGATATCC GTCCTTCAGG TACTGGTGAA AGTCCACTAG CTAACCTGAC	8640
AGATTGGCTT GAAGTACTC GTGAAGATGG TGTCAAAGGT CGTCGTGAAA CCAACACTAT	8700
GCCACAATGG GCTGGTTCAA GCTGGTACTA CCTCCGCTAT ATTGACCCGC ACAATACTGA	8760
GAAATTGGCT GATGAGGACC TCCTCAAACA ATGGTTGCCA GTAGATATCT ACGTGGGTGG	8820
TGCGGAACAT GCTGTACTTC ACTTGCTTTA TGCTCGTTTC TGGCATAAAT TCCTCTATGA	8880
CCTCGGTGTT GTTCCGACTA AGGAACCATT CCAAAAACCTC TTTAACCAAG GGATGATTTT	8940
GGGAACAAGC TACCGTGACC ACCGTGGTGC TCTTGTGGCA ACCGACAAGG TTGAAAAACG	9000
TGATGGTTCC TTCTTCCATG TAGAAACAGG GGAAGAGTTG GAGCAAGCGC CAGCCAAGAT	9060
GTCTAAATCG CTCAAGAACG TTGTTAACCC AGACGATGTG GTGGAACAAT ACGGTGCCGA	9120
TACCCTTCGT GTTTATGAAA TGTTTATGGG ACCACTCGAT GCTTCGATTG CTGCGTCAGA	9180
AGAAGGTTTG GAAGGAAGCC GTAAGTTCCT TGACCGAGTT TACCGTTTGA TTACAAGTAA	9240
AGAAATCCTT GCGGAAAACA ATGGTGCTCT TGACAAGGTT TACAACGAAA CAGTCAAAGC	9300
TGTTACTGAG CAAATTGAGT CTCTCAAATC CAACACAGCT ATTGCCCAAC TTATGGTCTT	9360
TGTCAATGCT GCTAACAAGG AAGATAAGCT TTATGTTGAC TATGCCAAAG GCTTTATTCA	9420
ATTGATTGCA CCATTTCAC CTCACTTGGC AGAAGAAGCTC TGGCAAACAG TCGCAGAAAC	9480
AGGTGAGTCA ATCTCTTATG TAGCTTGGCC AACTTGGGAC GAAAGCAAAT TGGTTGAAGA	9540
TGAAATTGAA ATTGTCGTCC AAATCAAAGG AAAAGTTCGT GCCAACTCA TGGTTGCTAA	9600
AGATCTATCA CGTGAAGAAT TACAAGAAAT CGCTTTAGCT GATGAAAAAG TCAAAGCAGA	9660
AA'TTGACGGT AAGGAAATCG TGAAAGTAAT TGCGGTACCG AATAAACTCG TTAATATCGT	9720
CGTTAAATAA CGAGTTTATT AGCTCTATCT GCCACCTCA ATAGTCCACT GGACTATTGA	9780
AsCCAATAA ATTAGTTAAC ATTGTTGTGA AATAAGATAG GAGTCCTTCA GAGTAGAATC	9840

1100

TGGAGGATTT TTTGAATCTT CTTATGAAAG TATGATATAC TATGGGCAAC TATAAGTTT	9900
GAAAAGTGAA ATAAGGAGAA TAAGATGCCA GTAAATGAAT ATGGTCAAAT GATTGGGGAG	9960
TCAATGGAAG CTTATACTCC AGGTGAATTG CCTTCTTTTG ATTTCTTAGA AGGGCGTTAT	10020
GCTAGGATAG AGGCTCTTTC AGTGGAAAAG CATGCGGAGG ATTTATTAGC TGTTTATGGC	10080
CCTGATACGC CTCGGGAGAT CTGGACCTAC CTCCTTCAGG AGTCAGTAGC AGACATGGAG	10140
GAACTGGTCA GCCTTTTAAA TCAGATGTTG GCTCGTAAGG ACCGTTTTTA TTATGCAATC	10200
ATAGACAAGG CAACTGGTAA GGCTTTGGGA ACTTTTCCC TCATGCGAAT TGATCAGAAT	10260
AACCGAGTAA TAGAAGTGGG AGCTGTCACT TTTTCTCCAG AGCTCAGGGG GACACGGATA	10320
GGAACAGAAG CCCAGTATCT CTTGGCTTGC TATGCTTTTG AGGAGCTTAA CTATCGTCGC	10380
TATGAGTGGA AATGCGATGC TCTTAACCTG CCATCCAGAC GAGCAGCGGA ACGTTTGGA	10440
TTTATTTATG AAGGAACCTT CCGTCAGGCA GTGGTTTATA AGGGGCGTAC AAGAGATACG	10500
GATTGGTTGT CTATGATTGA TAAGGACTGG CCTCAAGTCA AAGCTCGATT GGAAATATGG	10560
TTGCGTCCTG AAAACTTTGA TAAAAATGGA CGACAGCACA AGAGCTTGAG AGAACTTTAA	10620
GAGGTGTTGA GATGATTACT ATTAAAAAGC AAGAAATTGT CAAGCTAGAG GATGTTTTGC	10680
ATCTCTATCA GGCTGTCGGT TGGACAACT ATACCCATCA AACAGAGATG CTGGAGCAGG	10740
CCTTATCTCA TTCATTAGTA ATTTATCTGG CACTTGATGG TGATGCTGTG GTGGGCTTGA	10800
TTCGTTTGGT TGGAGATGGT TTTTCATCAG TTTTGTGACA GGATTTGATT GTTTTGCCTA	10860
GCTATCAGCG TCAAGGATT GGTAGCTCCT TGATGAAAGA GGCTTTAGGA AATTTTAAAG	10920
AGGCCTATCA AGTCCAGCTG GCGACAGAAG AGACAGAAAA AAACGTGGGA TTTTATCGTT	10980
CTATGGGCTT TGAAATCTTA TCCACCTATG ACTGTACAGG AATGATTTGG ATAAACAGAG	11040
AAAAATAAAA AAACCTGTTT GTTCTTAAGC AAAGTTTAAG GATGGTCTAG TATCATATAG	11100
TCATTAAATA AAGACCTCCT AACTTTATTT AATAAAATCC TAAACTTTTT TCATCACAAT	11160
CTCCTAATGA AGCCACCCAA TCAGGTGGCT TTTTTCGGT ACGACGGGCA TGTCGTATAT	11220
CTGAGGTGTA AGTCCTCAGC CTGACTATCG TGAGGTAGCA GGGAGAGGAA GGGATAGCGA	11280
AATCGTGGCT CTACGAACAG GAACGTGATA GTAAGGCGTA TATAGCGGAT AAGGAGGCTT	11340
CAAACTCTAA AGTCCAAAAA GGAGTCGTA ACCTATATGT GTAAATCACG AGAGTAATTG	11400
AATTTCGGACT AAGGTTTGTG TGAAAAAGAT AAATCTTTCT AGAGTCTAAA GACTCTCGCT	11460
CAGATTTCCCT ATTTTCACTG TAACCTTTTA ACGTCCTCAT ATCTTGATA AACGAGGAAA	11520
GATGTACGAC TTATCCCGTG AGGTTTCATG AGCGCTGAAA GCGTAGTAAC AACGAATCAT	11580
GAGAAGTCAG CCGAGCCCAT AGTAGTGAGG AAACCTCCGT AATGGAAGTG GAGCGAAGGG	11640

1101

GTGAATACTC AACAGTCTG GGGAGAGACT GTTTGAGGTC TGTCGCTAGA AAGAGAAAAC	11700
GACAGATCGA AGTAATCCTA CTTCACTTGT GTCTGTAAAA TGACTGGTCT GATAGAACTG	11760
GACTTTGAGG	11770

(2) INFORMATION FOR SEQ ID NO: 173:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4185 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

CGCGAAACTA CTTTCTTAGT ATAACACTTT CAGAATCATT GTCAATAGAA ATGACTTGAT	60
TTTTTCAATT TTTTCAAGCT ATTTCCAAGG GTTGTAATAAT CGTCCCTGAT TCTGCAAGAT	120
AAGTAGTAAA CTAACACTA AAAACAAGGT TGCCAAGAGC AAGGTAATAT AGTCTCCTTT	180
TTTCAAGGCC TGATAACTAT ACCATGTGCG TTTTCTCTCT TTTCCAAAGC GGCGAACTCC	240
ATGGCAGTCG CAATGGTATC AATGCGTTCT AGCGAGCTAA AAATCAAGGG CGTAATAATG	300
AGCAGATTGC CTTTGATTCTG TTGCATAAGA GAAGCTTTCT TGGATAATTC CATCCACGC	360
GCCTCTGAG ACATCTTGAT AGTAAAGAAT TCTTCTGCA AATCTGGAAT ATAGCGCAAG	420
GTCAGGCTGA CAGAATAAGC AATCTTATAG GGCACACCAA TTTGATTTAA ACTGGAAGCA	480
AACTGACTAG GATGGGTGT CATCAAAAAG ATAATAGCCA GAGGAATGGT GCAAAGATAC	540
TTAATGGCCA AATTTAGCAG ATAAAAGAGC TCCTGGCTGG TTAGAGTGTA GACACCGATT	600
CCCTGCCAAA TCACACTTCT CTCTCCATAA AGTCCAACCC CATACTCGGG AGAAAAGAGA	660
TAGACCATCA AAACGTTTAA AACGGCAAAT ATCGTCGCAA AAACGGCTAC AAAGGAAACA	720
TCTTTAAAGC GAATTTCTGA TAAATAGAGG AGAAAGACTG AAAAGATGGC AATCAGCAAG	780
AGCATTCTGG TATCATAGCT AATCATGGCC GCCAATGATA CCAGAATGAA AAAGAGAAGT	840
TTCCAGCTC CTGACAAGCG ATGAATCACA GTATCTCTAT GCTGGTAACC GATTAAATTIA	900
GCTTGCATCC CTCTCTCCTT TCTTTGTAAG ATGCCGTTAA ATCCAGTGA TCCACATCTA	960
GTTTCTTAGC CAAGTTAAAG ATGGAGGTTT CTTTGTAGAT GGCTTTTACT AACAGCTCAG	1020
GATCGCTCAA CAGACTGGCT GGAACAGTAT CGGCAATCAA TTCTCCATCC ACCATGACAA	1080
GGACCCGGTC TGAATAATCC AGCATCAATT GCATATCATG GGTAATCATG ACAATGGTAT	1140
GCCCTTTTGG ATGTAACCTC TCGAGAAATT CCATAATCTC AGTATAGTTC TTCTGATCTT	1200

1102

GACCTGCAGT	CGGTTTCATCT	AGGAGAATAA	TTTCAGCTCC	TAAGACCAA	ATTGAAGCAA	1260
TGGTGACACG	TTTTTCTGA	CCAAATGACA	GGGCAGAAAT	AGGCCAATTA	CGGAATTCAT	1320
AAAGTCCACA	GATTTTCAAG	GTTTCATATA	CTCTCGTTTC	AATTTCCCTTC	TCATCCACAC	1380
CTCGCAAACG	GAGCCCTAGA	GCCACCTCAT	CAAAAATCAT	ATTGGTTGAA	ATCATTGTGAT	1440
TAGGATTTTG	TAGCACATAT	CCTACTCGTT	CCGCCCCTC	TGCAACAGAA	TCGCCTTTTA	1500
TATCCTGTTT	TTCCCAAAGA	TAGCGTCCTT	CCGTCTGAAT	AAAGCTACTT	ATAGCCTTGG	1560
CTAGAGTTGA	TTTCCCTGCT	CCATTTTTC	CGACAATAGC	AATCTTTTCA	CCCTTTTAA	1620
TATCTAAATG	TAGGGATTTT	AAAATCGGTC	TATCATCATA	AGAAAAAGAT	ACTTCCTCTA	1680
GTCTAAAGAG	TGACTGCAAT	GCTGGGGTTT	CTTTTGCCAG	TTCATTCTGC	AACTGAACCT	1740
GACCTTTTGA	GATAGACAAG	TTATCCAGAT	TCGCTAATTG	TTCTTCCTTG	ACTAAGTCCA	1800
CACCTAATTG	ACGGAGAGTC	GTTAGATAAA	GGGGTTCTCG	AATTCCAATT	TGAGTCAATA	1860
AATCAGTCGC	AAGCAACTGG	TCAGGGCTCC	CATTAAAAAG	GATACGACCA	TCGTTTATCA	1920
AGACAATCCG	ATCCACAGGG	CGATGCAGAA	CGTCTCCAA	ACGGTGCTCG	ATAATAAGAG	1980
TCGTCGTCCT	CTCTTCCTTA	TGAATCTGGT	CAATCAATTC	GATAATATCC	TGACCTGACT	2040
TGGGATCTAG	ATTGGCGAGT	GGCTCATCAA	ACAAGAGAAT	CGGACTTTCA	TCAATCAAGA	2100
CACCAGCCAG	ACTGACTCGC	TGCTTTTGTC	CACCTGACAA	ATCCTGAGGA	CGCTGATCCA	2160
GTAAAGGAAG	AAGGTCCAGC	TTTTCAGCCC	ATTATATAAC	ACGACCTTTC	ATCTCATCTA	2220
GGGCTGTCAC	ATCATTTTCC	AGAGCAAACG	CCAAATCTTC	TGCCACAGAC	AAGCCAATAA	2280
ACTGCCCATC	TGTATCCTGC	AAAACGTGTC	TAACCAGATG	AGACTTATCA	TAGATGCTCA	2340
TATCAAAGGC	TACTTGACCC	TTTATCAAAA	ATTCTCCATA	TGTCTGACCC	TTGTAAATAT	2400
TGGGAATAAT	CCCATTCAAA	CACTGACCCA	AGGTAGATTT	ACCTGACCCA	GATGGTCCAA	2460
CAATTAAGAC	TTTCTCTCCC	TTGTAAATGG	TCAAGTCTAT	CCCTTGCAAG	GTCGGTTCTT	2520
GTGTGTGTTT	ATACCGGAAA	GAGAAATCCT	TCCACTCAAT	TaTAGCTTCT	TTCATCTTAC	2580
TCTCTTCATT	CGCTTCTTAG	ACTTCTATTT	TATCATAAAT	CAAGCCCTTC	TTGCAGTCTC	2640
TCCTCTTAAA	ATCTTAGCGC	CAAAAAGATT	CCTATCCTAG	CTTACTTGCC	TAACTAATCT	2700
ATAAACATCG	AAAAAGACTA	GTTGCCAGC	CTTCCCCATC	ATTTTATACT	CTTCGAAAAT	2760
CTCTTCAAAC	CACGTCAGCT	TCGCCTTGCC	GTAGGTATGG	TTACTGACTC	CGTCAGTTTC	2820
ATCTACAACC	TCAAAACCAT	GTTTTGAGCC	TGCTTCGTCA	GTTCTATCCA	CAATCTCAAA	2880
ACACTGTTTT	GAGCAACTGC	GGCTAGCTTC	CTAGTTTGCT	CTTTGATTTT	CATTGAGTAT	2940
TAGTCCTTTT	TCAAACCTCC	TGCACGAGTT	TGGCTTCCTG	CATAGGCAAG	TAAGAGAAGA	3000

1103

G TTCCTGCAA TAGCTACAGA TACACCATTG GCAATTCCCG CAACAATCCC TTGTGCAAAT	3060
A CTTTTTCTG CCGCTTCTTG ATAAATCACA ACATCTCCAA GTGGTGCCAA GACACCCCAA	3120
A CAAGGGCAT TTGCAAGTAG TTGAATGAGA TTAAAAATAA GAATATCTTT CCAGTCAAAA	3180
A CACCATTGA TCACGCGAAC GTACTTTCTA AAAAGTCCCA CAACTAAACC AAAGAGTCCG	3240
C TAGCGATAA TCCAAGTCCA CCATAGACCA TAACCAACAA GAGAGTCCTT GATTGCATGA	3300
C CAATCAACC CGACAAGCAA ACCGATAATC GGTCCAAAAA TAATAGAAAG TAGCGCTTGT	3360
A CCGCATACT GAAGCTGGAT GCTTGTATTT GGAACAGGGG TTGGAATGTT GATCATCCCG	3420
A TGACGACAA AGAGGGCAGC GCCAATTCG ACAGCAACAA CTTGTTTAAT TGTAATTTG	3480
A TTTCCATAC TATTCTCCTA TTTTATCCTT CTATTTTCTT TATTTCAATG GTCCAAGATG	3540
A ACCGACACC TACATTATAG GCCTTGCGAA AGGAACCTTG GTTGATAGCC AAACCTAAAC	3600
G ATAGAGAGA GTTGATGTAA AGGATGGGTT GCCCAATTCT CACATCTGCA AATGATTGTC	3660
C ATAGACAAC CTGATTTTGA TAGACCAGCA TATCAGCATG ATAGATGGTC ACTTCAAAAC	3720
G ATCACCAAA TTCTGGTTCC AGCTTGTAAG ATTCTTCCCG TGTGATAGAG GTCCAAAGCG	3780
A ACCGAAACG CACATCCAGA ATATCAATGG CTCCCTTCAC CAGATGATCT TCTATGATGG	3840
T CGCTACGAC TGAAGCTCT ACAATCTGTT CCACACTGAG CTCTGGCCCT ACTTCCTCAA	3900
A AGTAATGTG ACCACTGGCC AGTTTAGCAC CAGTATAGGC ATAGACATCA CGACCGTGA	3960
A AGTATAAGA ATGCTCTGTG TTTTGACGCC TATTGGCCAC CTCAGAAATC TCACGAATGG	4020
C TACAATGCC AACGTGTTTC TTGATAAAGG AAAGCGTCCC ATTATCTGGC GTGACAATGT	4080
A TTGATTTTT TGCAGTCTTG GCAACTACAC TCTTACGTTT CGAACCGACA CCTGGATCGA	4140
C AACCGATAC AAACGTCGTT CCCTCAGGCC AGTAATCCAC CGTCT	4185

(2) INFORMATION FOR SEQ ID NO: 174:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2069 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

TGATAGAGTT AAAGCCGCTG AGTCATTCAA TCCATCTCCA ACCATCAAAA TAGTGTGACC	60
TGCTTCTGTC AGTTTCTCTA CTAAC TAAA TTTCCCATCA GGTTC AAGT CTGTATAGAC	120
CTGATCAAAG GGCAAATCTT TGACTAATTC CTCTGTCCTA ATCAAAGGTGT CTCCTGTTGC	180

1104

CAGAATCAAT TTTTyCCCCCT GTGCCTTAAG TTTATCCAAG GCTGTTTTTG CTCTTTTCT	240
CAAAGGAGTA TGAATGCAGA ACATTCCAAT CAATTCATT TGATAAGCCA AGAATAAGAG	300
ATTGTAGTGA CTCTTGTA CTCAATTAA AGCATTTTGT TCTGAACTGA TATGAATCTG	360
CTCATCCTGC ATCAAGACAT AATCCCAAT AAGAACTGGT TGGCCATCTA TATGAGATTT	420
GATCCCCTTG CTGCGATAT ATTGGAGTTT CCCATGCATT TCCTCATGTT CAATTCCTC	480
TATCTCAGCT TGCTTGACGA TGGCATTAGC AATAGGATGA TAAATGTGTT CCTCAAGACA	540
GGCACTGATT CTGAGAATAT CTCCTCACT ATAGTCTCCA AAAGGTAACA CCTTTTCAAC	600
TATAGGATAA CTAGTTCTGA TTGTTCTGT CTTATCAAAC AAGAAAGTAT CAACTTCCAG	660
ATATTTCTCC AGAACATCTC CATCCTTAAT CACCATTTC CGTTCAACC CTTCCTTGAT	720
AACTGTCAAA TAAGCTACAG GAGTAGAGAT TTTCAAAGCG CAGGAGAAAT CGACCAATAG	780
GAAAGAAATA GCCTTAGAAA AAGAACCTGT CAATAGGTAA GTCAGCCCAG CCCCCAAGAA	840
ATTATATTG ACGACTTTAT CCGCCATCTT GATGAAATAG CGTTGTTTCG TTTTCTTGTT	900
TTCTTCAGAT TTCTTCATCA ACTCAATCAG CTGTAAAATA CGGCTGTTC TCTGATTATC	960
TGTTACACGA ATGCGTAAC CTCCAGTTT TAATACTGTA TTTGCACAAA CCAAATCAGA	1020
CTCTCTTTT TCAACTGGAA AACTCTCTCC TGTCAAGGAA CTTTCGTTGA CCATACCTAA	1080
ACCTGAACT ACTTGTCAT CAAACAGAAT TTCATTTCTT TGAGATAAGA TCAAGACATC	1140
TCCTATTTGA ACATCGGAAC TCTTGATACT AACACCCTA TCGCCCTGTA CTAGGAATAC	1200
ATCGCTCTCT TTTGCAAGAA GACTCTGTTC TAAATCTGTT GCAGTTTTTT TCAAGGACCA	1260
CTGATCTAAA TGATTCCCCA AATCAAGCAT AAACATGATA TTGCTAGCTG TCTGGATTG	1320
GTTCATAAAC AAAGACAATA AAATAGCCGA ACAGTCCAAG ACTTCCATCG TTAGTyCCTT	1380
ACGCGCTAGT GTTTGATAGG CTCTCTAAT ATAACCCAAA GCCTGATAAC AAGTCCATAT	1440
ATAGCGAATA GGATACGGCA CAAACTACG AAAAAGTACA CGCTTAACCG CTGCACCTGA	1500
AACAATAGAA TAAGCACTCT CTCTCTACG AATGGGAAGA GTCATCAACT CAGAACTTT	1560
CCCTTTATCA ATTCTTTTAA AAAAGGCTTC TGCATTATCT AATACAGAAA AGCCTTCTTT	1620
TATGCGTAGA GTAAAGTGCT GTTGATCCAT GTAAAACCTG ATAGACTCAA TCCCCTTTTC	1680
ATCTCTCGCC AAGGAACCAA GATAGTCTTG AATATCCAAG GTAAGTGAAA AAGAAGATGA	1740
TAGTCGGATA TGTTGGTATC CTCTATGTAG CACTTTAAAA GACATATTAT TCACCTATAA	1800
GGCTATCTAA TTGCTCTTCT TTTTCTCTT GCTCGTACAA ATATTGGCA TCTTGCAAGA	1860
CATCGTCTCC ATGTTGCTTC ACAACAGAAA CAGATGCATC TAGCTCGTCT TTCAACTTGT	1920
AAGCCTTAGC CAAAGCTTTA GAATAACCTT TTTTAGCTTC CTTACTTGCT AAGATTTTCA	1980

1105

AACCAAGGGT ACCAAATGCG ACACCACCCA AAAATAATGA AGATTTTTTC GCAACTTTTG 2040
 CAACGGTTAA TACTTCTTTT AACATAGGG 2069

(2) INFORMATION FOR SEQ ID NO: 175:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 4597 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

AAATCTTGCG CAATAAAGCT CATCTCCATC TCCCGATTGA AACAGTCACT CCCC GGACTG 60
 TTTCACGTC CCAAGACATA ATCTTAGGCA GATTTCTAAA ATTACTCA AAGTGGAAGT 120
 CATTGAGCTT TCGAATGACA GTTGAAGTTG AAATGGCCAG CTGATGGGCA ATATCGGTCA 180
 TAGAAATCTT TPCAATTAAC TTTTGCGCAA TCTTTGGTT GATAATACGA GGAATTTGGT 240
 GATTTTTCTT GACGATAGAA GTTTCAGCGA CCATCATTTT CAAGCAATGA TAGCACTTAA 300
 AACGACGTTT TCTAAGGAGA ATTCTAGTAG GCATACCAGT CGTTTCAAGG TAAGGAATTT 360
 TATAGGGTCT TTAATGTCTA GTAATTTTGT GATAAAATGT AATTGTTCCA TATGATTTCT 420
 TCTAATGAGT TGTTTTGTCT CTTTTCATTA TAGATCTTAT GGGACTTTTT TTCTACCCAA 480
 AATAGGCTCC ATAATATCCA TAGGGAATTT ACCCACTACA AATATTATAG AGCCCAAAGT 540
 TTTAGGTCGC TTGATAATAT GCGTTTTTTG AATTTTATAG ACTGCTCGTT TAACTCTAT 600
 TTACTTCGTA CCTTCTGGAG CGAGACGGAA TATTAGTCAC ATACAAAATG AGTACTATTA 660
 GGATTTTATT TTCAATGACA ATTTTCAGCCA GTCTTGTTAT AATCAGCCTA TAGGAATCAA 720
 GGAGGTGACT CTTATGGCTG TTTTGTGTCT TTTGGATGGA ATTGTGGTAG AAGTCCTTGA 780
 TGTCTTTTCT TCTTTTAATG GGGATAGTGA GTTTTCTTG TGTATAGCAT TTTGAATCTG 840
 GAATAGGACG CCATGACTGC TAAAAGATTT CTATAAATTA ATTTGATTTT CCTAATCAAT 900
 TTGTTTATAT CTTATTTTAT TCCACTATAA ACGTCTTAAA GACAAGAGTC AGTTTGTAT 960
 GGAACGCTCT CAGTTCGAGG AGATGTTCCA ACTTCAAAGT AGTCGCTTGA CGACGCAAGA 1020
 AAAATTACAA TTGTTTACCT CTGTGTTTGC TGGCCGTTAT GATGTTTATG CTAAGAATTT 1080
 TATCAATGAA CAAGGGAAAA TTCAGTATTT TCCTTCCTAT GATTATGGTT GGAAGCAGTT 1140
 GCCACCTGAA AAACGGAGTT TCCAGACATT GACGAAGTCC GTTTTGAAAT CTCATTTTCG 1200
 TGGGGAGGCA GCTATCGGTA TCTTTCCTAT GCACTTAGAT GATAGCTGTT ATTTTGTGGT 1260

1106

ACTGGATTG GATGAAGGAG ATTGGAAAGA AGCTGGTTTA ACCATTTCGAA GAATAGCCAG	1320
GGAACGCCAG ATGGAAGCCC ATTTAGAGAT TTCTCGTTTCG GGTCACGGAC TCCATATTTG	1380
GTTCCTCTTT GAGGAAGCGA TTCCGAGTCG AGAGGCTCGC TTGTTTGGAA AGAAACTGAT	1440
AGAACTGGCA ATGCAGGAAA GTATGCAACT GTCCTTTGAT TCTTTTGATC GCATGTTTCC	1500
AAATCAGGAT GTCTTTCCTA AGGGGGGATT TGGAAATTG ATTGCCTTGC CTTTCAAGG	1560
AGAAGCTTAC CATCAAGGGC GAACGGTCTT TGTGGATGAA CAGTTTCAGC CTTATGAAGA	1620
CCAATGGAGG TATCTACAAG AAATTCAGAG GATTTCAACT GCTAAAGTGG CACTGTTAAT	1680
CCAAGAGGAG TTAGGCAAGC AAGAATTGGA TAAGGAGTTG AAGGTCGTTT TATCCAATAT	1740
GATCCAACCTT GAAAAATCGT CTGTGACATC CAAGGCACCT TTTTCTTGAA AAATATGGCT	1800
TCCTTTTCTA ATCCCGAATT TTATAGTAGA TTGAAACTAG AATAGTACAC CTCTGCTTCT	1860
AAAACATTGT TAGAAATCGA TTTGACTTTC CTGATCGATT TGCTCTGTTA TTATTTCAAT	1920
TTACTATATT TAAAGCAGGC TATGCGACAG CCAACCTATC AAATTCCTGA GAGAATGTAT	1980
TTATTTGGAG AATCCGATCA TTATTTATGG TTGCCAAGAG GTTTGCTGTA TCCATTGCAA	2040
GATAAATTAA AGCAGGTATC TGTGGAAGAT AGGAGAAAGG TACAAAGGTC TATTAGCGTG	2100
GAATTTAAGG GAGAACTCAC TTTTGAGCAA GAGTTAGCCC TGTCAGATAT GACTTCTAAA	2160
GAAAATGCTT TACTTCATGC GGAGACTGGT TTTGGGAAGA CCGTTTTAGG TGCTGCTCTT	2220
ATCTCTGAAC GGAAAACAAA AACAATTATT CTAGTCCATA ATAAGCAACT CTTAGACCAA	2280
TGGCTAGATC GCTTAACTG CTTTTTGACT TTCGAAGAGG AGGAGGCTAT CCGTTATACG	2340
GCATCAGGTC GTGAAAAGGT AATCGGCTAT GTTGGGCAGT ACGGTGGGAC TAAGAAATGG	2400
CTGAGTAAAC TGGTTGATGT CGTTATGATT CAATCTCTAT TTAAGTTGGA AAATAGTCAA	2460
AGTCTTTTGG ATGAGTATGA GATGATGATT GTGGATGAGT GTCATCATGT CTCTGCCTTG	2520
ATGTTTGAAA AAGTTGTTGC TCAGTTTAGA GGGAAAGTATC TTTACGGTTT GACGGCTACG	2580
CCTGAGCGTA AGAATGGTCA TGAGCCTATT GTTTTTCAGA GAATFGGTGA GATACTCCAT	2640
ACTGCTGATA AGAGGGAAAC GGATTTTAAA CGGCAATTGC AATTAAGATT CACTTCTTTT	2700
GGTCATTGAG AAATTGAAAA GACCAAAGCA AGTAATTTTA TACAGCTTAG TGATTGGATT	2760
GCTACTGACT CAGTGAGGAA TCAGATGATT CTCAAGGATA TTCTAGCCCA AGTGGCAGAA	2820
GGACGGAATA TCTTGGTTT AGTTAATCGA ATTCAACAGA TAGATGTCCT TGAAAAATTA	2880
TTGAAAGAGA AAGAGGTTGA TGACTGTTAC ATTATTAGCG GAAAAACCAA AGTCCGAGAG	2940
AGAACGAGTT TACTGGAGAC GTTAGAACAG TTAGATAAAG GGTGTGTTT GTTGTCTACT	3000
GGAAAATACA TTGGCGAAGG TTTTGACTTA CCTCAGTTGG ACACGCTTAT CTTGGCAGCA	3060

1107

CCCTTTTCTT	GGAAAAATAA	TTTGATTGAG	TATGCAGGTC	GGATTCATAG	AACTACAAG	3120
GATAAGTCTT	TGGTGCCTAT	TTTCGATTAT	GTGGATATTC	ATGTTCCCTTA	TTTAGAAAAAC	3180
ATGTTTCAGA	AACGACAAGT	AGCTTATCGA	AAGATGGATT	ATCGTGTCAT	CGAGGGTGAG	3240
GAGAAACAAT	TCGTTTATGT	TGATAGTAGA	TATGAGAAAG	TGTTGAGAGA	GGACTTAGCA	3300
GGGGAAAGAC	AGGAATGCTC	GCTTATTTTA	CCTTATGTGC	ACCAGACAAA	ACTGATGAAT	3360
TTTCTAAAAG	AATTTAGGAT	TAGTCAAATT	GAGATATGTA	TACCAGAGAC	GGTTGCAAAT	3420
AAAGCATGGC	TAGACCAGTT	GAAGAGCCAG	AAAATTAAAG	TGCTTTTAC	TCAATCAAAA	3480
ATAGTAACGC	CTATTCTTTT	GGTGAATAAG	ACTATTGTTT	GGTATGGTGC	AATGCCATTA	3540
TTAGGGAAGG	TAGATGAGAT	GACCATATTA	CGTTTGAAT	CAGCTAGTAT	AGTTTCTGAA	3600
CTAGTGGCAG	GTTTACGATA	GAGAAAAATTT	TTAAAAATTT	CTATGTATGA	TTTTCATTTT	3660
TTTAGTGAGA	CTGTTGCCAT	TATCACATTC	GAATCACACA	AAATAAAAAA	ATTTTATATA	3720
GTACTTGACA	AATAGATTGA	AATATCATAA	AATAAAAAACG	GTTACAGAGT	TATTAATTAT	3780
TTAAGCTTCA	TGTCACCATT	AAAAATTGAA	ATAAAAGGAT	GTTATCACTA	ATACAAGTGA	3840
GCAGGAACCT	ATTTAATCAC	ATCAGAAGAA	GTTTCTTGAT	GTTTTTAAGT	AGGTCCTTT	3900
TATTTTAAAA	GGGAAATTTT	ATGATCATAA	AACGAATACT	AAACCACAAT	GCCGTAATTG	3960
CGCAAAGTAA	AAAAGATATC	GATATTCTTC	TTTTTGGAAG	GGGAATAGCT	TTTGAAGAA	4020
AAACTGGAGA	TAAAGTAAAT	CCAATTGATA	TTGAGAAAAG	TTTTTTTCTC	AAAAATAGAG	4080
ATAATATGAC	CCGTTTACA	GAGATGTTTA	TTAACGTTCC	TTTGGAGTTG	GTGTACATCA	4140
CCGAAAAAAT	AATTAACCTA	GGTAAAATAA	CATTGGGTAA	TAATTTTGAT	GAAATTATCT	4200
ATATTAAATTT	AACGGATCAT	ATTCTTCGA	GCATAGAACG	TTATAAAGAA	GGGATTATTA	4260
TTTCGAATCC	CCTACGCTGG	GAAATATCGA	AATATTATAA	AGAAGAATTT	GAACTTGGGA	4320
AAAGGGCTTT	ACAAATAATA	AAAAAAGAGT	TAGGTATTGA	ACTTCCAATT	GACGAAGCTG	4380
CATTCATAGC	GCTACATTTT	GTTAATGCTA	ATTTAGAAAA	TAATTTTCAA	GAGTCGTATA	4440
AAATCACTGA	AATAATTATG	GGAATTGAGA	AAATCATTCA	AGATTTCAT	TGFACTGAGT	4500
TTAACCAAGA	TTCTATTGAT	TATTATAGAT	TCATAACTCA	TATGAAATTA	TTTGCCCATC	4560
GCTTGGTTGA	GAATACAAC	TATTGTGACG	ATGATGA			4597

(2) INFORMATION FOR SEQ ID NO: 176:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 3984 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double

1108

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

CGGCTTATTT ACTACTTGTT CCATCATATA TGGAAATATGC ATGAAACCTG CTCTCATATT	60
AGGGAATTTT TTATCCACTA AATAAGAGC TTGGTACATC AAATGATTGC AAACAAAGGT	120
TCCTGCACTA TTGGATACAA CTGCCGGAAG TCCCTGTTTT TTGATAGCTT GTACCATCGC	180
TTTGATAGGT AAACACTAA AATAGGCCGA TGCTCCATCA ATACGAATCG GTGTATCAAT	240
TGGTTGATTG CCTTCGTTAT CAGGTATGCG AGCATCATCT TGATTAATAG CCACTCGTTC	300
AGGTGTTAAG CCGGTCCTGC CGCCTGCTTG TCCAATACAA AGTACAGCAT CTGGTTGATA	360
TCGTAATATT TCTGCCTCTA AAACCTCTGA CGACTTATAA AAAACCGTTG GAATTTCTAC	420
CCAGCGAACT TCAGCCCCAT TAATCTCAGA TGGTAATAAT TTTACAGCCT CCAAAGCTGG	480
ATTAATCTTT TCACCTCCAA AAGGATTAAA ACCTGTAACC AATATTTTCA TTTTATTTTC	540
CTTTACTAAA ATGCGAGAAA GTACATTAAG AATATGTGAA TAACAATCAT TACTAGAGCA	600
ACACCTGCTT GAGCCTTTAT AACGCCATTG TGATCTTTCA TATCCATCAA TGCTGCTGGT	660
AGAGCGTTAA AATTAGCAGC CATTTGGGTC AATAAGGTCC CACAATAACC TGCTGTCATG	720
GCAAGAGCAC CAGCCACAAT TGGATTAGCT CCCAGAGCAA ATACAAAGGG AACTCCAACA	780
CCTGCTGTAA TAACGGTGAA TGCTGCAAAA GCATTTCCCA TAATCATTGT GAATAGAACC	840
ATTCCAAGAA CATAGGCCAA AACTCCTATA AAGCGACTAT CTGAAGGAAC AATACCGCTA	900
ATCAGATGAG AGATAACATC ACCAACACCT GCTACAGTAA AAATAGCCCC CAAAGCCCCCT	960
AATAATTGAG GAACAATCCC ACTTGTTGAA ACTTGCTGAG TCATTGATT ATTTTCTGAT	1020
AACAGACTCT TAGGGTGAAT ATTGGTAATC ACAAGAACAG AAATTGTAGC AAACAAGGCG	1080
GCAAGGCTAA TCGAAATCTT GCTAAATTCT GGAATCATTT GCGCTAAGAC CAACGCAAGT	1140
ATTGCCATCA GCATAACTGG AATAAAAAAT TTATTTTCA ACCTGTTAGA TTCAATATTG	1200
GCTTTCATTT CATCTAAGGA TGGCAAGGTT CCGATACGGA CTTGCTTAAA CAATGTTAAC	1260
AGCGATAATA GGATTACAAT AATACCAATA CTCATATTTG GCATATAGGA ACCACCTATA	1320
AACGTAATAG ACAATAGAGT CCAAAATGCA GATGTCCCAA GTCGAAGTGG GTTTGTTTTA	1380
TC'TTTATAAC TACAATAGGC TGTATGGAGA AATTGACAAC CAATCACAAT ATAGGTCAAC	1440
TCTAATAGTT GCTTTGCCAA CTCTGTCATT TTTGTTCTCC TCCCCTAGTC TTTTGTGATA	1500
TCAATTTTTT ATCAAATAAA TAATTATAAA TCCCCACTAC AATAAGTGTT ATAACAGCAA	1560
CAATAATAGA TGTAGAAGCA ATCCCTGCAT AATTGCTTTC ATAGCCTAAC TGATCTAATG	1620

1109

TTCCCCCTAT CAAGAGGACT CCCCCAGCAC CTACAAACGT ATTTTGAGCA AAGAAATTC	1680
CAAAATTTTC ATTCGCAGCC GCACGCGCTT TTATTGTCTC ATCTTCAACC TCTGTAACT	1740
TTCTACCTAA TTGAGACTCT GCAGCTGCTT CTCCCATAGG TTGAACCAA GGTCTGACAA	1800
ACTGAGGGTG TCCTCCTAGA CGAATTGAAA AGAAACCAGC TAACTCTCGA ATAAAGAAAT	1860
AAACTGTATA GAAGTTTCCA ACTGTCAGAC CTTTAATCTT TCGAATCAAA TCGATTGATC	1920
GTGCTTGAG TCCAAAGGTT TCTGACAGCC CCACAAGAGG CAAGGTAACC ATAAAAATCG	1980
TGAGCACTCG CTGATTGCTA AATTCTTTTC CAAAATCTC CAAAATTCA ACGAGAGAAA	2040
CACCTGAAAC TAAAGCTGTA ACCAAACCAG CTAAGACTAC TGTGCAATT GTATCAAATT	2100
TTAAATAAAA ACCCACAACA ATGATTGCTA TTCCTATTAA TCTAATCCAC TCCATATCAA	2160
ACTCCTTTAT ATTCAAAATG ACAGTATTTT TAAATTTTA TCAAGATCAA TACCATTCTT	2220
TATTTAATGT GTTTTCTAG TTCTTTTGG TATTGTCTAT TGGATTCAA TTTTCTTTT	2280
TGCCATTTT TAAAAACCTC GTTATATTCT TTTGTTGTAA CAATATCTT TTGCAATTC	2340
ATTCCCTTAA AGATATATGG ATCCCCCTA ATACCAACTT GTGAGTATGG TTTTGAGAAT	2400
GGTACTACGT TACTTACAAC TGGAGAACCA CCAGATGAAG CTGTTGGCAT CAATAATGAA	2460
CTATCTGTCG ACCAAGCTTG AGCTTTGGCA TATTTTTCAT ATCTTTTCTC TAGGTCAGTG	2520
GTCTCAGAAA CAGCATCTTC TAACAATTTC TTATATTAT CCAACCAGG TTTAGCTACA	2580
ACATCCTTAT CTTTTCCTTT CGTAATACCA AGCTGTTTCA TGGCAGAAC AGATTTTGG	2640
TCTATAATAT TCAAGTGAGA CGCTGGATCT TGATAGCTTG GAGCCCATCC TGTACTGTT	2700
AAATCATAGT CTTTTTGAGA AGGAGCAACA TTGCCGTATT TATCATTTC CATCAAACCA	2760
TCAATAACAT TTCCAATAAC GTCTGTCCTC GATGTTGAG TCGCTATACT GTAGCCCAAT	2820
GATGCTGGAT CTAATGCATA GACATAAGAA AATGTTGTCG GTGCATCTGC TTCTTTATCA	2880
GTTTTCCAC AAGCCACTAA AATAGCTGAC GTGCTCAGGA CCACTCCTGC TGTAAAGAGC	2940
CACTTTTCT ATTCATAAA GAATCTCCTT TGGTTTATTT TAATCTACTT TTACAATCCA	3000
ACCTTCTGGC GCTTCAATAT CGCCAACTG AATACCGTC AATTCATTAT ATAATTACG	3060
CGTCACAGGA CCTACTTCTG TTCTACTATA GAATACATGG AAATCATCAC CATGTTGAAT	3120
ACCTCCAATT GGAGAAATAA CCGCTGCTGT ACCACAGGCA CCTGCCTCTA CAAAACGGTC	3180
AAGATTATCA ATTGGAACAT CACCCTCAAT AGGAGTTAAT CCCAAGCGAT GTTCTGCCAA	3240
ATAAAGCAAG GAATACTTG TAATAGATGG CAAGATAGAT GGAATCAATG GTGTTACAAA	3300
TTCATTTATCA GCTGTAATTC CAAAGAAGTT AGCTGATCCG ACTTCTTCAA TCTTTGTATG	3360

1110

AGTTGATGGG TCCAGATAGA TAACATCTGA GAAATGACGT GACTTGGCCA TTTTTCCTGG	3420
TAAGAGACTT GCAGCATAGT TTCCACCAAC CTTAGCCGCA CCTGTACCAT TTGGTGCTGC	3480
ACGGTCGTAC TCATCCTGAA TCAAGAAGTT GGTGGGACC AAACCACCTT TAAAGTAATT	3540
TCCAACTGGC ATAGCAAAGA TGGTGAAAT GTACTCTTCT GCCGGTTTTC CCCCATAAT	3600
ATCTCCGACA CCAATCAAAA GAGGGCGAAG ATATAAGGTT CCACCTGTTC CGTATGGTGG	3660
TACGTATTCT TCATTGCGAC GGACAACTGC TTTACAAGCT TCTACAAACA TGTCTGTCGG	3720
AACTTGTTGGC ATCAAGAGAC GGTACATGT ACGTTGCAGA CGTTTAGCAT TTTCATCAGG	3780
ACGGAACAGT TGAACACTGC CATCCTTAGT ACGATAAGCT TTCAAACCTT CAAATGCTTG	3840
TTGTCCATAG TGAAGACTTG GAGAAGACTC TGAAATATGC AAAGTTGCAT CCTCTGTAAG	3900
CTCTCCTTGA TCCCATGTGC CATTTTGGAA ATGAGCAAGA TAGCGATAAG GTAATTCAT	3960
ATAGGAAAAA CCGAGGTTTT CCGG	3984

(2) INFORMATION FOR SEQ ID NO: 177:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8703 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

TATCTAATTA TTGGTTTTTA TCGCTGACCT TGGCTATTGT TGGGGTTGTT TTACCCTTGT	60
TGCCTACAAC ACCTTTCCTT TTGTTGTCTA TTGCTTGTTC CTCCAGAAGT TCCAAGCGAT	120
TCGAAGATTG GCTTTATCAT ACCAAGCTCT ATCAAGCATA TGTAGCTGAT TTTCGTGAGA	180
CCAAGTCTAT TGCGCGTGAA CGAAAGAAAA AAATCATCGT CTCTATCTAC GTCTTGATGG	240
GAATTTCTAT TTATTTTGCA CCTCTTTTAC CAGTCAAAAT CGGTCTGGGT GCTTTGACCA	300
TCTTTATTAC TTATTATCTC TTCAAGGTCA TTCCAGACAA AGAATAGTTA AACAGTAGT	360
TATTTGCCTT GATAAAATTG AAAGCATATT CATAACAATA TGATATAATA AAATTGAAGT	420
AATATTCAGG GAGAATCAAA TGATTTACGA ATTTTGTGCT GAAAATGTGA CTTTACTTGA	480
AAAAGCGATG CAGGCTGGAG CTCGTCGGAT TGAACCTCTG GATAATCTAG CAGTTGGTGG	540
GACAACACCC AGCTATGGAG TGAATAAGGC AGCGGTTGAA CTGGCAGCTA ACTACGATAC	600
AACCATCATG ACCATGATTC GGCCACGTGG TGGTGACTTT GTCTATAATG ACCTAGAAAT	660
TGCTATCATG CTAGAAGACA TTCGTTTGAC TGCTCAGGCT GGAAGTCAAG GGGTTGTATT	720
TGGAGCTTTA ACTGCTGATA AAAAGTTGGA TAAGCCTAAT CTGGAAAAGT TAATTGCTGC	780

1111

ATCAAAAGGA ATGGAAATTC TCTTTCACAT GGCCTTTGAT GAACTAAGTG ATGAAGATCA	840
AGCGGAAGCT ATTGACTGGC TCAGTCAAGC CGGTGTCAC TGTATCCTAA CTCGTGCTGG	900
TGTGTCTGGC GACTCCTTAG AAAAACGTTT TGTTCACAT CACAGAATTT TGGAGTACGC	960
TAAAGGTAAA ATTGAAATTC TACCAGGTGG GGGGATTGAC CTTGAAAACC GTCAAACCTT	1020
TATCGACCAG GTGGGGGTAA CACAATTGCA TGGTACTAAG GTTGTTTTTT AAAAAATAGA	1080
AAGGAACTGC TAGCTTTGGG TAGCAGTTTT CACTTATGTT TGAAATTTTT AAATCCTATC	1140
AATTTAATCA AGAAAAGGCT CATGATTATG GTTTTATAGA AAATAGCGAA GTCTGGACAT	1200
ATAGTTGCCA GATTTTGCAA GGTGACTTTG TCATGACTGT GTCCATCACT GCTGATAATG	1260
TGAACTTTCA AGTCTTTGAC CAAGAGACTG GTGACCTCTA TCCTCACGTT TATATGAAAA	1320
GCATGAGGGG AAGTTTTGTC GGAAATGTCC GTGAGGCTTG TCTGGAGATT CTTTACCAGA	1380
TTCCGAAGCG TTGTTTTGAT GTGCAAGATT TTATCTGTCA TCAGACTAAG CGTATCATGA	1440
CTCAAGTTCA GGAAAAGTAT GGAAACCAGT TGGAGTATCT GTGGGAAAAA TCGCCTGATA	1500
CAGCTGTATT CCGCCATGAA GGCAATCAAA AGTGGTATGC CGTCTTGATG AAAATCTCTT	1560
GGAATAAGCT GGAAAAGGC AGAGAAGGAC AAGTGAAGC AGTCAACCTC AAGCATGACC	1620
AAGTAGCTAA TTTGCTTTCA CAAAAGGGGA TTTATCCAGC CTTCCATATG AGCAAGCGCT	1680
ACTGGATTAG TGTGTCCCTT GATGATACTT TATCAGATGA AGAAGTACTG GAATTGATAG	1740
AAAAAAGTTG GAACTTAACC TCTAAAAAAT GAAATATTTT AATAATTTTC ATGAACTTTC	1800
AATTAGCTAA ATATTCTTTA CTGAAGAGAT TTTTAGAAAA TATAGGATTT ACCACACTAG	1860
AGGAATATGG TGCCATCTTC AAATACCTGA TTGAGAATGT CAAGACGGAT CGTCAGATCA	1920
TCTATTCGCC TCACTGTCA TATGACCTCG GAATGGCAGT GGCAAATAGC CTTGCTGCTG	1980
TCAAGAATGG TGCAGGACGT GTTGAAGGGA CTATCAATGG TATTAGGGAG CGAGCTGAAA	2040
ATGCTGCTTT GGAAGAAAT GCAGTGGCTC TCAATATTCG CCAAGATTAC TACCAAGTAG	2100
AAACCAGTAT TGTCTTAAAT GAGACCATCA ATACGTCAGA AATGGTTTCT CGCTTCTCTG	2160
GTATTCCAGT TCCTAAAAAC AAAGCCGTCG TTGGTGGCAA TACCTTCTCC CACGAATCTG	2220
GTATTCACCA AGATGGAGTC CTTAAAAATC CTCTCACTTA TGAGATCATC ACACCTGAAT	2280
TGTTTGGTGT TAAGATTCTG CTTGAAAAAT TATCTGGTCG CCATGCTTTT GTTGAGAAAC	2340
TGAGAGAATT GGCCCTAGAT TTTACAGAAG AGGATATCAA ACCACTCTTT GCTAAGTTCA	2400
AGGCACTGGT CGATAAGAAG CAAGAAATCA CAGATGCAGA TATTCGAGCT TTGGTAGCTG	2460
GAACCATGGT TGAAAATCCA GAAGGCTTCC ACTTTGATGA TTTACAACCT CAAACTCATG	2520

1112

CAGATAATGA CATGAACCG CTCGTTAGCC TAGCCAATAT GGATGGTGAG AAAGTCGAAT	2580
TTAATGCGAC AGGGCAAGGT TCCGTTGAAG CAATCTTTAA TGCTATCGAT AAGTTCTTTA	2640
ACCAATCTGT TCGTTTGGTG TCCTACACTA TCGATGCGGT AACAGATGGA ATCGATACCC	2700
AGGATCGGGT TTTGGTCACT GTTGAAAACA GAGATACAGA AACCATCTTT AATGCAGCAG	2760
GGCTTGATTT TGATGTGTG AAGGCTTCTG CTATTGTCTA TATAAACGCT AATACCTTTG	2820
TTCAAAAAGA GAATGCAGGT GAGATGGGAC GCAGTGTTTC TTACCACGAT ATGCCTAGTG	2880
TGTAAAGGAG AAGGCTATGG CAAAGAAAAT AGTAGCTCTA GCAGGAGACG GAATTGGCCC	2940
AGAAATCATG GAGGTTGGTT TAGAAGTTCT GGAGGCTCTA GCTGAAAAA CAGGTTTGA	3000
CTATGAGATT GACAGACGAC CGTTCGGAGG TGCAGATATT GATGCAGCAT GACCTCCCTT	3060
ACCTGATGAA ACCCTTAAGG CAAGTAGGGA AGCAGATGCT ATCCTACTAG TAGCTATCGG	3120
TAGTCCCTCAG TATGATGGAG CAGTGGTTCG CCCTGAACAA GGCCTGATGG CTCTCCGTAA	3180
GGAACCAAT CTTTACGCTA ATATTCGTCC TGTA AAAATC TTTGACAGTC TCAAGCATTT	3240
GTCACCACTC AAAGTGAAC GAATTGCTGG TGTA GACTTT GTCGTGGTGC GTGAATTGAC	3300
AGGCGGGATT TACTTTGGAT ATCATATICT TGAAGAGCGC AATGCGCGTG ATATCAACGA	3360
CTATAGCTAT GAGGAAGTGG AGCGGATTAT TCGCAAAGCC TTTGAAATTG CAAGAAATCG	3420
CAGAAAAATC GTTACTAGTA TCGATAAGCA AAATGTTCTA GCGACCTCAA AACTCTGGCG	3480
GAAAGTAGCT GAGGAAGTCG CACAGGATTT CCCAGATGTA ACCTTGGAAC ATCAGCTGGT	3540
AGACTCAGCT GCTATGCTTA TGATTACCA TCGTCTAAG TTTGATGTTA TTGTAACGGA	3600
GAATCTTTT GGAGATATTT TATCTGATGA ATCAAGCGTC TTATCTGGTA CACTTGGGGT	3660
TATGCCATCA GCCAGTCATT CTGAAAATGG ACCAAGTCTC TATGAACCTA TTCACGGTTC	3720
AGCACCTGAT ATTGCAAGTC AAGGAATTGC CAATCCTATT TCCATGATTT TATCAGTTTC	3780
CATGATGTTG AGAGATAGTT TCGGACGTTA TGAGGATGCA GAGCGTATCA AACGTGCTGT	3840
TGAGACAAGT CTGGCGGCAG GAATTTTAAC GAGAGATATA GGAGGTCAGG CTCAACAAA	3900
GGAAATGACG GAAGCTATTA TTGCAAGGTT ATGAAGTTAG ACGAAAAAAT TACTCTAGTC	3960
CTTTTGATTT GGAATGTCAT CATTTTCTTG ATTTATGGTA TTGACAAATC TAAGGCAAGG	4020
AGAAGAGTTT GGCGCATCCC TGAGAAAATC TTAATTATTT TAGCCTTTAC TTTTGGTGGT	4080
TTTGGTGCCT GGCTAGCAGG AATCATCTTT CACCACAAGA CTCGAAAATG GTACTTTAAA	4140
ATAGTTTGGT TTCTTGGGAT GGTGACCACA CTAGTAGCCT TATATTTTAT TTGGAGGTAA	4200
TGGATGGCAG GGTCTTCGAG GGAATACGCT GCTTGGGCTC TAGCGGACTA TGGTTTAAAG	4260
GTCGTGATTG CAGGATCTTT CGGTGACATT CATTACAATA ATGAACCTCA TAATGGCATG	4320

1113

TTGCCAATCG	TTCAGCCTAG	AGAGGTTAGA	GAGAACTAG	CCCAGCTAAA	ACCAACCGAC	4380
CAGGTAAC TG	TGGACTTGGA	ACAACAAAA	ATCATCTCAC	CAGTTGAAGA	ATTACACCTTC	4440
GAGATAGATA	GCGAGTGGAA	ACATAAACTC	CTAAATAGTT	TGGATGATAT	CGGTATTACC	4500
TTGCAGTATG	AAGAGTTGAT	TGCTGCTTAT	GAAAAACAAC	GACCAGCCTA	CTGGCAGGAT	4560
TAGAAAAAAT	AGAAAAGGAG	ATATAGTAAA	CTGAAATAAG	ATGTAAACAA	ATGAATTGGA	4620
GCTTAACATC	CATTTCAGC	AATTTT TAG	AACTACAGT	GGACTATTCT	GGATTCAACA	4680
CATTATAAAA	TTATGACAAA	ACACATTAC	AAGAAGGCTA	CGACATTTTA	AAAGGTGAGG	4740
GCGGATGTAT	CGTTTGCCCT	ACTAAAGTTG	GTTACATTAT	CATGACCAGT	GACAAGGCAG	4800
GACTTGAGCG	TAAGTTCGCA	GCCAAAGAAC	GTAAGCGTAA	CAAACCAGGT	GTGTTCTCT	4860
GCGGTAGCAT	GGATGAAC TT	TGCGCTTAG	CGCAACTCAA	CCCAGAAATT	GAAGCATTCT	4920
ACTAAAAACA	TTGGGATGAA	GATATTCTTC	TTGGTTGTAT	CCTTCCTTGG	AAACCAGAAG	4980
CCTTTGAAAA	ACTCAAAGCA	TACGGGGATG	GCCGTGAAGA	ACTTATTACT	GATGTACGTC	5040
GTACTAGCTG	TTTTGTTATC	AAGTTTGGA	AAGCAGGTGA	ACAATTGGCT	GCCAAGCTTT	5100
GGGAAGAAGG	TAAATGGTC	TACGCCTCAT	CTGCTTCAAT	GACAAAACGA	TTGAAACTCG	5160
CTATGAGCAA	GGTGTAAATG	TGTCTATGGT	CGATAAGGAC	GGCAAAC TCA	TCCCAGAACA	5220
AGGAGGAGCA	CGTTCAACTT	CACCAGCTCC	AGTTGTGATC	CGTAAAGGCG	TTGACATTGA	5280
TAAATCATG	ATGCACCTGT	CAGATACTTT	TAACTCATGG	GACTACCGTC	AGGTTGAGTA	5340
TTATTAGGAT	AGAGAAGAAG	TCTAGTGTTA	TGAGATATTA	AAGCTCCTAA	CACTGGGCTT	5400
TTGTTTAGAA	TTTCTTTTCT	TTTCTATAG	GATATGGTAT	TCTATGTAGA	AAATATATGT	5460
TAATAAGTAA	TGCCAATATT	TAAACATCAT	TAGTAAAAGG	AGTTAGATFG	ATGAATAAAA	5520
GAAAAGTTAG	TTTAGAAGAT	TTTATAAAT	GGTATAGTCT	AAATAAAGAA	GAGTTATTAA	5580
ATAAGGCAAC	TGTTGGTGAA	AAGTTTAATG	ATAAATTAAA	AGAAGAGTTT	CTCCAGGAAT	5640
GCGCTTTGGA	TAGGATTTTA	ACAATGTCAA	TCGATGAATA	TGTAATAGGA	AAGGGACAGC	5700
AAAATAAGTC	TTTATGCTAC	GCTCTTGAGA	AGGGAAAATA	CAAAAATCTA	TTTCTTGGA	5760
TTTCTGGTGG	CTCAGCTTCA	AAATTTGGTA	TTTATTGGA	TAAAAAACA	AACAAATATA	5820
AAGATCAAGC	TAATAATGAG	ATTTTCAGAGT	TGGATCAGCG	ATTTTCAAAA	TTAAATCAG	5880
ATTTGTATGA	AATTATCAAA	GAAGTATTC	GTTTAACTT	TGAAAATCCT	ATTTTGTATA	5940
TGAAAAGATC	AACAAATGAA	TTTATGGTC	GTTCTGCTAT	GGTGACAAA	TTACTTTGTA	6000
TCTATACTGA	GGGAGATCCT	TTCTTTGGTG	TAAATATTAA	TAGTCAGAAA	GAATTTTGGA	6060

1114

ACCACTTTGT TTCTCAGACA AATCAAGGTG GACCTTATCT GCAAATCAT AAAATAATTG	6120
AACTGGTGTC CAAAACCTTAT CCTGAGTTGG AGCCATCGAA ATTAGGAAC ATGCTTTTGTG	6180
AGTATTCTAA GCTTTTATG GAAAAAAGG AAGACAATAG TACAATGGAT TCATCAAACA	6240
ATTTTCGTCA TCAATTAACT CAATCTCTAT TAAAGTCTCC AAACCTCATC CTCCGCGGTG	6300
CTCCTGGCAC GGGAAAACT TATCTTGCTA AAGAAATTGC TAAAGAATTA ACGGATGGCA	6360
ACGAAGATCA AATCGGATTT GTACAATTTC ACCCATCATA TGATTATACG GATTTTGTAG	6420
AAGGTTTAAG ACCAGTATCA AATGGGGATG GAGCTATTGA GTTTAGGCTA CAGGACGGTA	6480
TTTTTAAAGA TTTTGTGTCAG AAAGCAAAAG AAACCCAATT GATTGGAGGA CAAGATAATT	6540
TTGATGAGGC TTGGGATTCT TACTTAGAAT ATATAAATGT TGCTGAAGAA AAAGAATATA	6600
TAACAAAAAC ATCTTACTTA TCTGTTAATA GTAGACAAAA TTTGTCAGTA AATTATGATA	6660
GTGGTGTTC AGGATGGTCA CTACCTAGCA AATATGTTTA CGAGTTGTAT AAAGATAAAA	6720
ATTATAATAA GCAAGAATAC TACAAAAGTG GTGGAAAAAC TGTCTAGAA ACATTGAGAA	6780
AGAGATTTGG TTTGAAAGAC TATGTTTCCC CAACAGAAAT TGATACTGAT AAGAATTTTG	6840
TCTTCATCAT CGATGAGATC AATCGTGGG AGATTCTTAA GATTTTGGC GAACTCTTTT	6900
TCTCTATCGA CCCC GGCTAT CGTGGTGAAA AAGGAAGTGT TTCTACCCAA TATGCAAATC	6960
TACACGAAAC TGATGAAAAG TTCTATATCC CCGAAAATGT TTACATCATC GGAACATGA	7020
ATGATATTGA TCGTTCAGTG GATACCTTTG ATTTTGCTAT GCGTCGTCGT TTTCGTTTGTG	7080
TTGAAGTTAC TGTCGAGCGT CAAGCTGGCA TGTGGATAA AGAGTTGAAT ATCCATGCAG	7140
AAGAAGCAAA AATTCGTCTA AGAAACTTGA ACGCTGCTAT CGAAAATATT CAGGAATTAA	7200
ACAGTCAITTA TCATATTGGA CCAAGTTATT TTCTTAAGTT GAAGGATGTA GATTTTGACT	7260
ATGAATTACT CTGGTCTGAT TATATTAGC CTCTCCTAGA AGACTACTTG CGAGGTCTCT	7320
ATGATGAGST TGAACTTTG GAaACTTTGA AAAAAGCATT TGATCTGACA AATAATGAGC	7380
AAAAAGATCA GGCAGTAGCT GATGACAATG AAGGCGATGA AAACGATGAT GCGGATTACT	7440
GATAATCAAC ACAAGATTAT TAAAGAAAAA TTTGTTGAAG AATATCCTAA ACTAAGCAAT	7500
CCTCTTTTAG ACAGAACCTT GGAAGTCTA TCCCAAGATG AACGTATTTT CATTTTCCA	7560
AATGATTWGA CTCATACTCC TGATTTGGAT AAGGACCAA AGATTTTGA AACAGTCAAT	7620
CAGAAAATCA AGACAGGGAA CGTGATTGGT TTTCTTGAT ATGGTCAGGA AAGATTAACG	7680
ATTTCCTCAC GATTTTCTGA TGAGAGTAAT GACCACTTT TGCATTATCT CTTAAACAAG	7740
GTTCTTCATA TCAATCTCAC TAGTTTAGAT GTTGCTTTGT CTCGTGAAGA GAGGCTTTAT	7800
CAACTTTTGG TGTATCTCTT TCCCAAGTAT CTACAAGCTG CTATTCGAAA AGTCTTTAT	7860

1115

AAGGAATATC ATCGATTTTC TCATAACGAC AGTCATGTTA AGGGAGTGAT TGATGTAAGA	7920
AACCATCTCA AGAAAAATCT TCCTTTCACG GGAAATATTG CCTACCCAAC GAGAGAGTTC	7980
ACCTATGATA ATCCCCTCAT GCAGTTGGTC CGTCACACTA TTGAATACAT TAAGAATCAG	8040
AAAAGCATTG GTCAAGGGGT ACTAGATAAT CTCTCAACTA GTCGTGAAAA CGTATCTGAA	8100
ATCGTGCGTG TAACGCCCTC TTATAAACTA GCTGATCGTG CTAAGATTAT TCGGGGAAAT	8160
CAATCTAAAC CTATACGTCA TGCATACTTT CACGAGTACA GAAACTTACA AGAACTTTGT	8220
CTGATGATCC TAAACCAAGA AAAGCACGGT TTAGGGTATC AAGATCAAAA AATCTATGGT	8280
ATTCTCTTTG ATGTTGCCTG GCTTTGGGAA GAGTATGTTT ACACCTTGTT GCCAAAAGGT	8340
TTTGTACATC CCAGAAATAA GGATAAGACG GATGGAATTT CAGTATTTTC TGTGGGAAA	8400
CGAAAAGTAT ATCCAGATTT TTATGACAGA GAACGAAAGA TTGTTCTAGA TGCAAAATAT	8460
AAAAAAGTGG AATTGACTGA AAAAGGAATC AACCGTGAGG ACTTATTCCA GCTGATTTC	8520
TATTCTTATA TTTTAAAAGC TGAGAAGGCT GGACTGATTT TTCCTAGTAT GGAGCAGTCA	8580
GTAAATAGTG AAATAGGAAA AGTAGCTGGC TATGGAGCTC AATTGAAGAA GTGGTCTATT	8640
CGAATCCCTC AGAATGCCCTC ATTCTATAGT ACATTTTGTA AAATGATGGA AAATTCAGAA	8700
GAG	8703

(2) INFORMATION FOR SEQ ID NO: 178:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4854 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

CATCACCAGT TTTAGATGGC TTAAACAGTG AAATTATTGC TTTTAATCTT TCTTGTTTCGC	60
CTAATTTAGA ACAAGTACAA ACAATGTTGG AACAGGCATT CAAAGAGAAG CACTACGAGA	120
ATACGATTCT CCATAGTGAC CAAGGCTGGC AATATCAACA CGATTCTTAT CATCGGTTCC	180
TAGAGAGTAA GGGAATTCAA GCATCCATGT CACGTAAGGG CAACAGCCAA GACAACGGTA	240
GGATGGAATC TTTCTTTGGC ATTTTAAAAT CCGAAATGTT TTATGGCTAT GAGAAAACAT	300
TTAAATCACT TAACCAATTG GAACAAGCCA TTATAGACTA TATTGATTAT TACAACAATA	360
AGAAAATTAA GATAAACTA AAAGGACTTA GTCCTGTGCA GTACAGAACT AAATCCTTTG	420
GATAAATTAT TTGTCTAACT GTTTGGGGGC AGTACACAAG AAAGCGCTTT AAAACCAGTA	480

1116

GACCTTTTCA TAAGGTTCGC TTGATGTACC AAGATGAGGC TGGTTTCGGT AGAATCAGTA	540
AACTGGGATC TTGTTGGTCT CCAATAGGAG TAGGTCCACA TGTCCATAGT CACTATATAC	600
GAGAATTTTCG CTATTGTTAT GGAGCTGTTG ATGCCCATAC AGGCGAATCA TTTTCTTAA	660
TAGCTGGTGG ATGTAATACT GAGTGGATGA ACGCCTTTTT AGAAGAGCTT TCACAAGCTT	720
ATCCAGATGA TTATCTTTTA CTCGTTATGG ACAATGCTAT ATGGCATAAA TCAAGTACCT	780
TAAAGATTCC GACTAATAT TGGTTTACCT TTATTCCTCC ATACACACCA GAGATGAACC	840
CATTGAACAA GTGTGGAAAG AGATTGTAAC ACGTGGATT T AAGAATAAAG CCTTTCGAAC	900
TTTGAAGAT GTCATGAATC AACTCCAAGA TGTACATAAA GGATTGGAGA AGGAGGTGAT	960
AAAGTCCATC GTTAATCGGA GATGGACTAG AATGCTTTTT GAAAACAGAT GAGTATAAAA	1020
TTGAATTGCT TATAAAAAAG CTCCATACAC TGGATGTGTA TAGAGCAATG GGGCTTTATT	1080
TGATATAGAG TTCTTGGTTT TTTAGGACAA TTTCTCGGAT ACTTGCAAAC TTTTAAAGTT	1140
TTTTGATTTC TTCTGGATGA GTGACGAGAG TGATAACATA ACCTTCCTTG CCCATACGAC	1200
CAGTACGGCC AGCACGGTGT GTGTAGGTTT CGCTATCTCT AGGAATATCA AAGTTTACGA	1260
CACATTCTAG GCTATCGATA TCAATTCCAC GAGCCAAAAG GTCAGTTGCA AGAAGCAGGG	1320
TTAGTTGGTT ATCTTTAAAC TTTTCTAAGA TGATTTTCT AAATTTAACA TTAACATCAC	1380
TAGCGAGGGA AACAGCCAAT ATATCACGAT ACTGTAGTTT TTCCTCGGCA TTCCCAAGGT	1440
CTGACAGGCT ATTGAAGAAG ACTAGACCAC GGAAATCCTC TACATGAGCC AGTTTTCGTA	1500
GCATATCCAC TCGATGACGT TGGTCTACCT GCATGTAGAA ATGCTGGATA TTGTCCAATT	1560
TTTGATCAGA GAGATCAATA GTGCGTGTAT TCGGCACAAT CTTTCTTGG TCAAAGTTGG	1620
TCGTGGCACT CATGTAGACC AGTTGGTGGT CACGAGGTGC GTAGTGAGTG ATTTTTTCTA	1680
CAAAGTGAAT CTGAGAATCA TCTAGTAATT GGTCAAATTC ATCCAGGATG ATGGTTTCCA	1740
CATTTCATCAT CTTGATTTT TTAAGTTTAA TGAGTTCAAA GATACGGCCA GGAGTTCCAA	1800
TCAGAATTTT TGGCCCTTT TTAAGACGTT CAATTTGTCT TTTCTGACTT GAACCTGAAA	1860
GGAAGAGTTG AGCAGTCAAT CCGATAGCTT CTGCCACGT TTTACATACA TCAAAAATCT	1920
GTCCAGCAAG TTCCGTATTT GGTGCTAGAA TCAAGAGTTG TTGGGCTTTT TTCTTTTGT	1980
GTCTGAGAAG ACTTGGTAGG AGATACGCTA GGGTCTTACC AGTTCCGGTT TGGCTCACTC	2040
CTAGGAGGTT TTCTCCAGCA AGAAGGGGCT CAAATAGTTG AGTTTGAATG GGGGTGAATT	2100
CTTGGAACC GAGTTGGTCA CTCAGTTCTT GCCATTCACT CGGTAGTTTG GTTTTCATTT	2160
TTCTGCCTCA AATCTAATGC CAGCAGTCTG GCGCATGGTA TATAGTAGCT CATGAACAGA	2220
GCCTGCATCA TACAGCCAAG TTTGGTAGAG ATTCAGATCT GGTGCTGGA TCATGTGTGC	2280

1117

AAATGCAGCG ACTTCCTCAG TCATCGTATG AGGAGCCTGT TGGATAGGAA GCTGGACTTG	2340
ATTTCCCTTG TGGTCGGTAA AAATAGCTGA GCGAATATGC TCAATCGTGT TGAGAGTCAA	2400
GGTTCCATCT GTTGTATAAA TCTCGCAAGG AAGATTGGAA GTGATGTTTT TTCCAGCCTT	2460
GATGTGAACT TGATAGTCTG GGTAGAAGAG GATACCATCT CCATTTAGGT CAATGCTATT	2520
GTCAAGCTGT TGAGCATGGT AAGTCGCGTC ATTGGCTTTT CCAAAAAGAC GAACAGCAGC	2580
ATAGAGGGGA TAAATCCCCA AATCCATGAG GGCTCCACCA GCAAAACGGT CTGAAAAGAC	2640
ATTTGGTGTT TGTCCAGCCA ACAAGTCAGG CATCTTGGAA GAGTATTTGG CATAGTTGAA	2700
ATCTGCTCCT AACACTTGCT TATCTGCTAA AAAGTTTTTG ATAGTAGTAA AGGCTTTCTC	2760
GTGGTAATTA CGAGCTGCTT CAAAGATAAA ACAGTTATTT TTTTCAGCTG TTTGAATCAA	2820
ATCAAACCAT TCTTGTGGTT GAGAGACAGC TGGCTTTTCG AGAATAACAT GTTTACCAGC	2880
AGACAAGGCA GCTTTTGCTT GAGCAAAATG TAAGGAGTTT GGACTGGCGA TATAGACTAA	2940
ATCAAAAGAA GATTTGAAGA AGACTTCTAA TTGATCGAAT AGTTGGATAT TCTGATAGCG	3000
AGAAGCAAAG GTTGCTGCAG TTTCTAGTTT TCTAGAATAG ATTGCGACCA GTTGGTATTC	3060
TCCACTGGTA TGGGCTGCTT CTATGAAATG ATGGCTGATA GCGCCAGTTC CGATGACACC	3120
TAATTTTAGC ATAAATACTC CTTTTCGGAT TTAAATCCTT TCTTTCATTA TAACATAGAT	3180
AGACGGGACT ATCCAACAGA GAGGAGAAAA TTCAAAATAA GCTATTAGCT TTCTTTCCG	3240
AATAAATAGA TAGAAGCATA GAATCTAGCA AACCTAGATT TAAAAATGTG CTATAATAGA	3300
AGGAGGAAAA GGAGGATTCT CAGACATCTA GGTATCACCC CAACTAATGA TTTGTCAATT	3360
TATCCGCGAT ATGCTGGACT TGCCAGCAAA AAATGTGACG ATTTTGAGAG GAAGTAACAT	3420
TCACGCTTTG CCTTCCATGC CTTACTCAGC GTAAGATTTC TATACTAGTA TAGACGTCTT	3480
GGCGGAGTTA GATAATGGAA TCCAAGTTAT CATCGAAATT CAGGTTTCATC ATCAGAATTT	3540
TTTCATCAAT CGCCTATGGC CTTATCTGTG CAGTCAGGTT AATCAAAACC TAGAAAAAAT	3600
TCGCCAACGT GAAGGTGATA CCCACCAGAG CTACAAACAA ATCGCACTAG TATACGCTAT	3660
CGCAATTGTC GATAGTAATT ACTTCTCAGA TGACCTAGCT TTTCATAGTT TTATAGTAAA	3720
ATGAAATGAG AACAGGACAA ATCGATCAGG ACAGTCAAAT CGATTTCTAA CAATGTTTTA	3780
GAAGTATAGG TCTACTATTC TAGCTTCAAT CTACTAGAAA TTCCATAGAT AGAAAACTAC	3840
ATAATCTCTA CAGATACGGA TGTGGAGTT GATGTAAGAT GCTTTGGCTT GCTAGAGGAA	3900
TTGTGGATTG CCAAAATGTA TCATTGAAAT TATTGCTCAA ATTTGTTATG ATATAAATAT	3960
GAATAAAAGT AGACTAGGAC GTGGCAGACA CGGGAAAACG AGACATGTAT TATTGGCTTT	4020

1118

GATTGGTATT TTAGCAATTT CTATTTGCCT ATTAGGCGGA TTTATTGCTT TTAAGATCTA	4080
CCAGCAAAAA AGTTTGTAGC AAAAGATTGA ATCGCTCAAA AAAGAGAAAG ATGATCAATTT	4140
GAGTGAGGGA AATCAGAAGG AGCATTTTCG TCAGGGGCAA GCCGAAGTGA TTGCCTATTA	4200
TCCTCTCCAA GGGGAGAAAG TGATTTCCCTC TGTTAGGGAG CTGATAAATC AAGATGTTAA	4260
GGACAAGCTA GAAAGTAAGG ACAATCTTGT TTTCTACTAT ACAGAGCAAG AAGAGTCAGG	4320
TTTAAAGGGA GTCGTTAATC GTAATGTGAC CAAACAAATC TATGATTTAG TTGCTTTTAA	4380
GATTGAAGAG ACTGAAAAGA CCAGTCTAGG AAAGGTTTAC TTAACAGAAG ATGGGCAACC	4440
TTTTTAACTT GACCAACTGT TTTCAGATGC TAGTAAGGCT AAGGAACAGC TGATAAAAGA	4500
GTTGACCTCC TTCATAGAGG ATAAAAAAT AGAGCAAGAC CAGAGTGAGC AGATTGTAA	4560
AAACTTCTCT GACCAAGACT TGTCTGCATG GAATTTTGAT TACAAGGATA GTCAGATTAT	4620
CCTTTATCCA AGTCCTGTGG TTGAAAATTT AGAAGAGATA GCCTTGCCAG TATCTGCTTT	4680
CTTTGATGTT ATCCAATCTT CGTACTTACT CGAAAAAGAT GCGGCCTTTGT ACCAATCTTA	4740
CTTTGATAAG AAACATCAAA AAGTTGTGCG TCTAACCTTT GATGATGGTC CAAATCCAGC	4800
AACGACCCCG CAGGTATTAG AGACCCTAGC TAAATATGAT ATTACAAGCG GGGT	4854

(2) INFORMATION FOR SEQ ID NO: 179:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 2186 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

TAAACAGGTG TTAGGTGCTC TAAACTATTA AAATCTAAG GAAATAAGGC TACTTTTCTT	60
GGGTCTTGTT CATAGTAGGT GTGGTTCTTT TTTTCGAGTG TAGCCCATAG CTTTGAGCGC	120
ATAGTGGATG GTAGTTGGAT GACAGCCAAA TTCAGAAGCT ATTTTCAGTCA AATAAGCATC	180
TGGATTGTCA GTAAGATAGT TTTTAAGTCT ATCTCTATCA ACTTTTCTTG GTTTTGTTC	240
TTTTACTTGG TGGTTTAGCT CTCCTGTTTT CTCTTTTAGC TTTAACCAGC CATAAATGGT	300
ATTACGTGAC ATTTGGAAAA CGTGTGATGC TTCTGTTATA CTACCTGTTC GCTCACAATA	360
AGAGAGAACT TTTTACGAA AATCTATTGA ATATGCCATA AGAAGATTAT ACCACATTGT	420
GTACTATTTT TGGTTCATTT TACTATATTT CTAAACACTT AGAAATAATA AAACAAATTA	480
AATATTATTT CTAAATATTT GAAAATAACA TCTATTGTA TTATACTATC TTTGAGGTAA	540
CTATTATGAA CTATATCAAA AGACCACATT ATTTAGATTT TTTAAGAAAA CATCGTGACC	600

1119

GACCAATCAT CAAAGTTGTG AGTGGAGTTA GACGAGCTGG TAAATCTGTG CTTTTTCAAC	660
TCTATAAAGA GGAGTTACTA GCAACTGGGG TAGACGAGGA TCAGATTATA TTCATCAATT	720
TCGAAGATTT GAGTTACTAT GATCTGCGAC ATTTTCAAAC ATTATTCGCT TATATAAAAG	780
ATCAATTAGT TAGCAAGAAA ACATACTATA TCTTTTGA TAGAAATCAA TATGTTGAAA	840
AATTTGAACT GGTAGCAGAT AGTCTATTCA TCTTAGCAAA TGTAGACCTC TATTTGACTG	900
GATCTAACGC CTACTTTATG AGTAGCCAAT TAGCAACAAA CTTGACTGGT CGGTATGTTG	960
AGATAGAGGT TCTTCCTTTG TCATTTGAAG AATATCTATC AGGTCAATCT CTCACAGAGA	1020
ATCTGAATAC AACAGAAATT TTTAACAATT ATCTCTTTAG TGCTTTCCCT TACTTATTGC	1080
AAACATCATC TTACGATGAA AAAATTGACT ATCTCAGAGG AATATATAAC TCCATACTGT	1140
TAAATGATAT TGTCAGTAGA TTGGGAAAAC CAAATCCTAC TATTATTGAG CGCATTGTCC	1200
GAACCCCTCT CAGTAGTACA GGTAGCTTAA TATCAACAAA TAAGATTCGC AATACCCTAG	1260
TCAGCCAAAA TGTTTCAATA TCCCATAATA CTTTGAAAA TTATTGACA ACTTTGACAG	1320
ATAGTTTACT TTTTATATCC GTTCCACGTT TTGATGTAAA AGGTAGAGCA TTATTGCAAC	1380
GTTTAGAAAA ATATTATCCC GTTGATTAG GTTTACGACA TCTCTTATTA CCAGACCAGA	1440
AAGAAGACAT TAGGCATATC TTGAAAATA TGGTATATTT GGAATTGAGA CGTAGATATT	1500
CACAAGTATA TGTTGGTAAT TTAGATAAGT ATGAGGTGA TTTTGTGTT GTAAGTATC	1560
TTGGCCACTA CGCTTATTAT CAGGTCAGTG AAACAACACT TGCTCCAGAA AACTAGAAA	1620
GAGAACTTAG ACCACTAGAA GCCATTAAAG ATCAATTCCC TAAATATCTA TTAACAATGG	1680
ATACGATTCA GCCAACAGCC AATTACAATG GAATCGAGAA GAAAAGCATT ATAGATTGGT	1740
TACTAGAAAA ATAGATAAAT ATAAATCATA CAGCTAATTA GATTTGCAAC AGTCTGTTAT	1800
CAATGATTCT ACCCAAATCC TAACAAGATA TAGTGAATTT CGAATACGCT ATATAATACG	1860
GACACTTGAA AATAGAAATT GGGGATGAAA GGGGATCTAT AATTTCTGGA AGTACTATCA	1920
AAAATTAATA TCATAGTCTT ATTAGAGAAT AGCATCACCC ACTTTCTCAA ATAAGATTAA	1980
ATTGTAAGTG AATTATAATG AAAAAGAGAC TGAGCAATCA GTCTTTAAAA TCAGAAAAGC	2040
GCATAGTATC AGGTATTGAA CAACCTTGAT AATATGCGTT TTATTATGGA AATATTTGCT	2100
TCATTTTCTC CTGAAATAGA GCTTTTGCTA TCCTATTTT CTCTATTTC TATGATTIAC	2160
TTCAACTTCT TACCTCTTGG GAAAAA	2186

(2) INFORMATION FOR SEQ ID NO: 180:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 3236 base pairs

1120

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

GTCACACGTT TGACTTCACG TATTTTCATAA GTATAAACTT TATTTTATC GGTTAGATAA	60
ATCTTCATGC CATTTTtagc ATTATCTAAA GGAGAAAATA ACATTTTATt AGCATTATCA	120
ACACCAAAGA TATGGTgACT AGCTAGACTA TAATTTcCTT CTCCCATTAC TTGCTCGCGT	180
TTCATTGTAC CAGCTCCGTA GAAGAGATTA ACATTATCAA GTCCTTTAAA AATCGGCAAA	240
TTCATTTCCA ATTcAGGAAT TGCAATTCCC CCAATAACTG GTAATTTTtG AGCATCCCAT	300
TGAGAAGTtA GAACAGCTTC CGAAGAGATA GCTTTGACAG AATCAAAGTC AAAATtGCCT	360
TCTGTATCCT GATTTTCTTC TAATTTTCT TTTGATACCT GGCTAACTTG ATACTTATtG	420
GTATTCcAGA CTATGAAAAT ATTTCGAATT TGAGTATTAA AAATCAAAGC CAGTGACAGT	480
AATATCAGAA ATCCTGCTAG GATATTtGTC AGCAGATTTT TTCGCTTGTT TTTCTTTTtA	540
TTATTTTtTT GAGACATTAT GCTTCACCTT CTGTTTCGTT TTCTGTCCCA ACTTCTTCTT	600
TTTCTGCCAC CGCAACCGTT GTGAAAGTCA CTATCTGAGC ATCTTGATCC AGGCGCATTa	660
CTTTAACTCC CATAGTTGCA CGTCCTGTTT GTGAAATATt GGCAAGATTG GTTCGAATCA	720
TGACACCTGT ATCAGTGATA ATCATCAAAT CCTCATCCCC TTGAACAGTC ATAAGACCGG	780
CCAGCAAGCC ATTTTtTTCG GTAATTTTAG CTGTCTGCAT TCCCTTACCA CCACGACCTT	840
TTGTTGGGTA TTCAGTAGCG ACTGTACGCT TACCATATCC TTTTtCTGTG ATAATAAGAA	900
CCTCATCTTG ATCAGTAATC AAGCTGGCAC CAACAACtGT GTCTCCTTCA CGAAGGTtAA	960
CACCTTTcAC ACCAGTGGCG ATACGGCTCA TACCACGAAC GGCTGATTGA TTAAAGCGAA	1020
CTGCATAACC AAActTGgTA CCAATGATAA TATCCATATC TCCTTCTGCC AACAAGACAT	1080
TGATTAACTC ATCTTCATCC TTtAAATtCA GCGCTTTGAG ACCATTTTGA CGAATATTGg	1140
CAAActCCTT AACACTGGTT CTCTTCACAA TACCGTGACG GGTGTAAAG AAGAGATAAG	1200
CATCATCACT GCGATCAGAC TCAACATTGA TAACCGCTG AATACTTTCG TCTTCATCCA	1260
ATTTCAAGAG ATTGACTACT GGtAGCCCTT TGGCAGtCCG ACCATACTCA GGAATTTCAt	1320
AACCTTTtAG ACGATAGACA CGtCCCTTGT TTGTGAAGAA GAGCAGATGA TCATGGGTGC	1380
TAGTTGACAC TAACTCACGA ACAAAGTCAT CATCTTTCAC TCCCGTTCCT TGGACACCAC	1440
GACCCCCACG TTTTTGAGCA GTGAActCGT CCTGATCCAA ACGCTTAATG TAGCCTCTGT	1500
TAGAAAGGGT AATCAAGACA TCCGATtCTT CAATCAAGTC CTCATCCTCG AGACTCAAGA	1560

1121

CCTGTCCAAT CATCAACTCT GTACGGCGCT TATCAGAAAA TTTACGTTTA ACTTCATCCA	1620
ATTCGTCTTT GATAATTTGA GAAACACGTT CAGGCTTAGC AAGAATATCT GCTAAATCCG	1680
CAATCAGAGC CAAGAGGTCA TCATACTCAG ATTGAATCTT ATCGCGTTCC AACCTGTCA	1740
AACGACGAAG ACGCATATCA AGGATAGCTT GACTTTGACG TTCAGAAAGC TTAAACTTGC	1800
TCATCAACTC AGCTTGAGcT TCCGCATcCG tTTCACTAGC ACGGATGATA CGAATCAyTC	1860
GTCGATATGG TCTAGCGCAA TCAAGAGACC TTCTAAGATA TGAGCGCGCG CTTCGCTTTT	1920
TTCTTTATCA AAACGTGTAC GACGAACAAC CACTTCTTTT TGGTGCTCGA TATAAGCATC	1980
CAAAATCTGA CGAAGAGACA AAATTTTCGG TATACCATTT TGGATAGCGA GCATATTGAA	2040
ACCAAAATTG GTTTGCATTT GGGTCATTTT GAAGAGGTTA TTGAGAATAA CATTTGGCTGA	2100
GGCGTCGCGC TTGACTTCAA TAACAAATCG AACACCTTCA CGGTTTGACT CATCACGTAC	2160
TGCTGTGATA CCCTCAATGC GTTTTTCCTG AACCAAGCGA ACAATATGCT CATGCACCTT	2220
GGTTTTATTG ACCATGTAAG GAAATTCTGT TACAACGATA CGCTCACGAC CAGTCTTAGT	2280
CGTTTCAATC TCTGTACGAG AACGTAGGAC AATCGAACCT TTACCTGTTT CATAAGCCTT	2340
ATGGATACCT GATTTCCCCA TGACAAGAGC ACCAGTTGGA AAATCTGGTC CAGGCAAGAC	2400
TTCCATCAAG TCCTTGGTAG TCACTTCAGG ATTATCCATG ACCAACTTCA CTGCATCAAT	2460
gGTTTACACC AGATTATGAG GTGGAATATT GGTTGCCATC CCAACCGCGA TACCAGTTGC	2520
TCCATTAAAC AAAAGGTTTG GAAAACGCGC TGGCAAGACC AAGGGTTCCC GTTCATTGGC	2580
ATCATAGTTA TCAACGAAAT CAACTGTATT TTTGTTGATA TCACGAAGCA TTTCCAGAGC	2640
AATCTTGCTC ATACGTGCCT CGGTATAACG TTGAGCGGCA GCACTATCTC CATCCATGGA	2700
ACCAAAATTC CCATGACCAT CTACAAGCAT GTAACGGTAG CTCCACCATT GAGCCATACG	2760
GACCATGGCT TCATAAATAG AGGAATCCCC GTGTGGGTGA TATTTACCCA TGACATCCCC	2820
TGTAATACGA GCAGATTTTT TATGGGGTTT GTCTGGGGTC ACACCCAATT CATTCATTCC	2880
GTAGACAATG CGACGGTGAA CAGGTTTTAA GCCATCTCGA ACATCAGGAA GAGCTCGCGC	2940
TACGATAACA CTCATGGCGT AGTCGATAAA ACTTGCCTTC ATCTCCTTTG TCAGATTGAC	3000
ATTCACTAAA TTTTATCCT GCATTAATAA ATGCCTCATT TCACAATTAG TAAGTAACAA	3060
CATTATACCA TAAATTCCA TCTATTTCAG CCTCTAAACC ACTAAAACGT TTACATCGAG	3120
AACTATAAGG CATATTCGTG ACAAAGTTTT TTAAAAGTGA TAGAATGAAG TTGTCTAGGG	3180
AAAACCCCTA ATAGAATAAG GAGATGGTTA nACAATGACT CTGACTAACA CACAAA	3236

(2) INFORMATION FOR SEQ ID NO: 181:

1122

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8651 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

AGGTCCGTGAA GTATTGGAAC AGGAAGGTCA AGAGTTTTTG GAACATTTCA AAAAATCTCT	60
GGAGTCAGTT GAAGTAGTAG CCATCTCAGG TAGTCTGCCA GCTGGCCTTC CAGTTGATTA	120
CTATGCGAGC TTGGTAGAAC TTGCTAATCA AGCTGGCAAG CATGTAGTCT TGGACTGCTC	180
AGGTGCAGCA CTTCAGGCTG TTCTTGAATC ACCCCATAAA CCAACAGTCA TCAAACCAAA	240
TAATGAAGAA TTGTCTCAGC TTCTTGGAAG AGAAGTTTCT GAGGATTTGG ATGAATTAA	300
AGAAGTACTT CAAGAACCTT TGTTTGCAAG GATTGAATGG ATTATCGTTT CACTTGGTGC	360
CAACGGTACT TTTGCCAAAC ATGGTGACAC TTTCTACAAG GTAGATATTC CTAGAATTCA	420
GGTGGTAAAT CCTGTTGGAT CTGCAGACTC TACTGTGGCA GGAATTTCTT CAGGACTTCT	480
TCACAAAGAA TCGGATGCAG AATTACTCAT CAAGGCAAAT GTCCTTGTA TGCTCAATGC	540
TCAAGAAAAA ATGACTGGTC ATGTCAACAT GGCCAACTAT CAAGCTCTAT ATGATCAATT	600
AATAGTAAAA GAGGTATAAA ATGGCTTTAA CAGAACAAAA ACGTGTACGC TTAGAAAAAC	660
TTTCTGATGA AAATGGTATC ATCTCAGCTC TTGCATTTGA CCAACGTGGT GCTTTGAAAC	720
GCCTCATGGT TAAACACCAA ACAGAAGAAC CAACTGTGGC CCAATGGA GAACTTAAAG	780
TCTTGGTAGC AGATGAATTG ACTAAATATG CTTCATCTAT GCTTCTTGAC CCTGAGTATG	840
GACTTCCAGC AACTAAAGCT CTTGATGAAA AAGCTGGTCT TCTCCTTGCT TATGAAAAAA	900
CAGGTTATGA CACAACAAGC ACAAACGCT TGCCAGACTG CTTGGATGTT TGGTCTGCAA	960
AACGTATTAA AGAAGAAGGT GCAGATGCAG TTAAATTTCT GCTTTACTAT GATGTAGATA	1020
GCTCAGACGA ACTCAATCAA GAAAAACAAG CCTACATCGA ACGCATCGGT TCTGAGTG	1080
TGGCTGAAGA TATCCCATTC TTCCTTGAAA TCCTTGCTTA CGATGAAAAA ATTGCGGATG	1140
CAGGTTCTGT AGAATACGCT AAAGTAAAAC CACACAAAGT TATCGGCGCT ATGAAAGTCT	1200
TTTCAGACCC ACGCTTTAAC ATTGATGTTT TGAAAGTTGA AGTTCCTGTT AACATTAAAT	1260
ATGTTGAAGC KTCGCTGAAG GTGAAGTAGT TTATACACGT GAAGAAGCAG CAGCCTTCTT	1320
CAAAGCGCAA GATGAAGCAA CGAACTTGCC ATACATCTAC TTGAGTGCTG GTGTATCAGC	1380
TAAACTCTTC CAAGATACTC TTGTATTTGC TCATGAATCA GGTGCGAACT TTAACGGAGT	1440
TCTTTGTGGC CGTGCTACAT GGGCAGGATC AGTTGAAGCT TACATCAAAG ATGGTGAAGC	1500

1123

AGCAGCTCGC GAATGGtCGC ACAACTGGAT TTGAAAACAT TGACGAACTC AACAAAGTTC	1560
TTCAAAGAAC AGCAACTTCA TGGAAAGAAC GCCTGTAAGA AAGTCCTCCT AGTTTAGGAA	1620
CATGAATCTA AAAAAATTTA AAAAAAGTTG TATGTAAAGG CTTACAAAAT AACTTACTTG	1680
TGCTATACTT AAATCACAAG TTAATATGAA TTAGAAAGTA ACTATATGAA GTATAATAAA	1740
AATAGGATAT AGTTTATTTT ACCAGCTAGG AAGGAAAAAT ACGGAAACAA TATTGCCAGA	1800
ATAAACTATA TTTAGATGCA CATTTTCATTC ATTGTTTTAT AAAAGGAGAA GATAAACGGC	1860
TACTAAAAAG AGTTTTAAAG CGTTAGTTGT AGGACTAGGT ATTGTTTCAA TATTCTTATC	1920
AGCCTTACCT ATGGTTAGTG GTTCTGTATT TGCAGATAGT GCCCTAACTA CAGTAGATAA	1980
AGCAAATGAT ATTGTTTTGA ATGTTGATGG GAATAAATTT TATAATGTTT CGGTTTCAGA	2040
AGATATTGTA AATGCTGGTC AAATTTTGA AGATTATTTT TATGTAGATA AATTTGGAAA	2100
TATAAA'TTTA AAAGGCAC'TC CTGAAGAGTT AGCAAAAAAT ATTGGTATTT CTGTACAAGA	2160
AGCAAGTTTG ATGTATGGAG CTGTAAAAGA GTTACCCAAC GTTTACGAAA GAGGTCCTGT	2220
AGGTTTTCGT TTCAATCTTG GTCCTCAAGT GAGGGGGATG GGTGGCTGGG CTGCTGGAGC	2280
TTTCGCTACT GGATATGCTG GATGGCATT'T GAAACAATTT GCGGTTAATC CTGTTACATC	2340
TGGATTTGTT GCTGTAATAA GTGGTGGCAT TGGCTGGGCT GTAAAACTG CTGTAGAAAA	2400
TTATTTGACA GTTGCTGTAG CTACAGTAGA AGTGCCGTTT GTGAACCTTG TTTACACCAT	2460
AGATTTACCT TAGAGGTAT TTCTTTATGA ATCATTTCTT TAAAAAATA ACTGTATTTT	2520
GTTTTATAGT TTCTTGTTT CTTTGT'TAT TAGACTTAAT GAATTTTAAA AATGTAGCTA	2580
CTTTTTTATT TTTCTGTCTT CCTGT'TTTG TTTTGATTTA CAAAAATAAA TAAAAACAGA	2640
GCCTCTGTTT GATGAATTTT AGAACATAGT TAAGTTTAA AAAAAAGTTGT ATGTAAAGGT	2700
TTACAAAATA ACTTACTTGT GCTATACTTA AATCACAGT TAATACAAGG TGAGTGTAC	2760
TAAGTAATAT TAGGCATGAT CACAGGTGAA TTAGAAATCA GCTGATTTTC TAGTTCATTT	2820
GTGGTCATTT TTTGTACTTA TATACCTTTA AGATATAAAA GGAGGTTGAC ATGTATCGAA	2880
TTCTAAATCC AATGAATCAC AATGTCTCGC TTGTCAGAAA TGATAAGGGA GAAGAGGTGA	2940
TTGTAATTGG TAAGGGAATT GCATTCGGAA AGAAGAAGGG GGATTTGATT GCTGAAAATC	3000
AGGTGAGAA AATCTTTCGG ATGAAGACCG AAGAGTCCAG AGAAAACTTT ATGGCTCTTC	3060
TCAAAGATGT TCCGCTTGAT TTTATCACAG TGACCTATGA AATCATTGAT AAGCTATCAA	3120
AGAAATATCA TTATCCGATT CAAGAGTATC TCTATGTAAC CTTGACAGAT CATATTTACT	3180
GTCTTTATCA AGCTCTAACT CAAGGAAGGT ACAAGGATAG TAATCTGCCA GATATTTCCG	3240

1124

CTAAGTATCC TGTCGCTTTT CAAATCGCAA ATGAAGCTTT TGAAATTAC CGTCAGAAGC	3300
TAGCAGATCA TTTTCCTGAG GACGAAATTA TTCGGATTGC TTATCATTTT ATTAATGCTG	3360
AAGGTGAAAA TGAAGTGGAA CTTGTGGAGT CGATTGATAA GAGGAAAGAA ATTCTCAGGA	3420
ATGTTGAAGA AGTTTAAACG GACTATGCAA TTCAACGAAC TAAAAAGAAT AACCATTCTT	3480
ATGATCCCTT TATGATCCAT TTGAATTATT TCTTGGATTA TTTAGACAGA TCTAGAGATG	3540
ATAACCAATC ACTTCTGGAT ATGGAAGATC ATATTAAACA ATCCTATCCA AAAGCCTTCG	3600
AGATTGGTTC CAAGATCTAT GATCTGATTA CGCAACATAC GGTCTTGAT TTGTATAAAA	3660
GTGAACGAGT TTATCTAGTT CTACATATCC AACGTTTATT GTCATAAAAA TTTATTTAAA	3720
ACTATATAAG GAGAATTCTA TCATGAATAG AGAAGAAGTA ACATTGTTAG GTTTTGAAAT	3780
CGTAGCCTAT GCTGGCGATG CTCGTTCAAA ACTATTGGAA GCCTTGAAGG CTGCTGAAGC	3840
TGGTGATTTT GAAAAAGCGG ACGCTCTGGT AGAGGAAGCT GGTAGCTGTA TTGCAGAGGC	3900
TCACCACGCG CAAACAAGTC TATTGACTAA GGAAGCTTCA GGTGAGGACT TGGCTTATAG	3960
TGTAACCATG ATGCATGGCC AAGACCACTT AATGACAACT ATCTTGTTAA AAGATTTGAT	4020
GCATCATTTA ATTGAACCTT ACAAGAGAGG AGTTCAATAA TGAATAAACT AATTGCATTT	4080
ATCGAGAAAG GAAAGCCTTT CTTTGAAAAA CTATCTCGTA ATATCTATCT TCGTGCTATT	4140
CGTGATGGTT TCATTGCAGG TATGCCTGTT ATTCTCTTCT CAAGTATCTT TATCTTGATT	4200
GCCTTTGTAC CAAACTCATG GGGCTTTAAA TGCTCTGATG AAGTTGTAGC CTTTCTGATG	4260
AAACCTTATA GCTATTCTAT GGGTATTCTG GCTCTCTTGG TAGCTGGTAC AACAGCTAAG	4320
TCATTGACTG ACTCAGTAAA CCGGAGCATG GAAAAAACCA ATCAAATCAA GTATATGTCA	4380
ACATTGTTGG CAGCAATTGT TGGTTTGTG ATGTTGGCAG CTGATCCTAT CGAAAGTGGT	4440
CTAGCTACTG GATTCTTGGG GACAAAAGGT TTGCTTTCAG CCTTCCTTGC TGCCTTTGTT	4500
ACTGTAGCCA TCTATAAGGT TTGTGTTAAG AACAACTCA CTATTCTGAT GCCTGACGAA	4560
GTTCCACCAA ATATCTCACA AGTCTTTAAA GATGTGATTC CATTCACTCT ATCTGTTGTT	4620
TCTCTTTATG CTCTTGACTT ATTAGCACGT TATTTTGTG GTTCTAGTGT GGCAGAAATCA	4680
ATCGGTAAAT TCTTCGCACC ACTCTTCTCA GCAGCAGACG GATACCTTGG TATTACCATT	4740
ATCTTTGGTG CCTTGCCTT CTTCTGGTTT GTTGGGATTC ATGGTCCATC TATCGTTGAA	4800
CCAGCTATCG CAGCTATTAC CTATGCCAAT GCCGAAGTTA ACTTGAACCT TCTCCAACAA	4860
GGGATGCATG CAGACAAGAT TCTTACTTCT GGTACACAAA TGTATTATCGT TACCATGGGT	4920
GGTACAGGTG CGACATTGGT CGTTCCATTT ATGTTTCATGT GGTTGACAAA ATCGAAACGT	4980
AACCGTGCAA TCGGACGTGC TTCAGTAGTT CCTACCTTCT TCGGTGTAAA TGAACCAATC	5040

1125

TTGTTTGGTG CACCTCTTGT TTTGAATCCA ATCTTCTTCA TTCCATTAT CTTTGCTCCA	5100
ATTGCAAACG TATGGATTTT CAAATTCTTT ATTCAAATC TTGGAATGAA CTCATTCACT	5160
GCTAATCTAC CATGGACAAC TCCAGCTCCA CTAGGTCTAG TTCTTGGAAC TAACTTCCAA	5220
GTGCTATCAT TCATTCTTGC TGGCCTTCTA ATCGTGGTTG ACGTTGTCAT TTACTATCCA	5280
TTCCCTTAAGG TCTATGATGA ACAAATCTT GAAGAAGAAC GTTCAGGTAA GTCTAATGAT	5340
GAATTGAAAG AAAAAGTTGC TGCAAACCTC AACACTGCAA AAGCGGATGC TATTCTTGAA	5400
AAAGCGGGTG TCGATGCAGC AAAAAATACC ATCACTGAAG AAACAAATGT CCTCGTTCTC	5460
TGTGCAGGTG GAGGAACAAG TGGTCTCCTT GCAAATGCTT TGAATAAGGC AGCAGCAGAA	5520
TACAATGTCC CTGTGAAAGC AGCAGCAGGC GGCTATGGTG CTCACCGTGA AATGTTACCA	5580
GAGTTTGATC TTGTTATCCT TGGCCCTCAA GTTGCTTCAA ACTTTGAAGA TATGAAAGCA	5640
GAAACAGATA AGCTCGGTAT TAACTAGCG AAAACAGAAG GCGCTCAATA CATCAAATTA	5700
ACTCGTGATG GAAAAGGTGC TCTTGCAATC GTACAAGCGC AATTCGATTA AGGCTAGAGA	5760
CTCTGAAATA GTCTCCCATC GTTACGGAAA TCGCTATGGC GAATTTCCCTA TTATTAATTC	5820
GTCGGTAAAA AGATATCGTT TTTACCTCCT CATGTCACAA TTCGGTGACT TGGTACAAGA	5880
AGTGAGATGG AGAAGGATGG CTCACTGACT CCTCTCCTCT CACTTTTACT TTATTTAAAT	5940
CAAGAAATAG GTGAAAAAAA TGACAAAAAC ACTTCCAAAA GACTTTATTT TTGGTGGCGC	6000
AACAGCTGCT TATCAAGCAG AAGGTGCTAC ACATACTGAT GGAAAAGGAC CAGTTGCTTG	6060
GGATAAATAT CTTGAGGATA ACTACTGGTA CACTGCCGAA CCAGCTAGTG ATTTTACAA	6120
TCGATATCCA GTTGACCTCA AGCTAGCAGA AGAGTATGGT GTCAATGGTA TTCGAATTC	6180
TATTGCTTGG TCACGTATTT TCCCGACTGG TTACGGCCAA GTAAATGCTA AAGGTGTTGA	6240
GTTTATCAT AATTTATTTG CAGAGTGTC CAAACGTCAT GTTGAGCCTT TTGTAACCT	6300
TCATCACTTT GACACGCCAG AAGCTCTCCA CTCAAATGGA GACTTCTTAA ACCGTGAAAA	6360
TATCGAACAT TTTGTAGACT ACGCTGCCTT CTGTTTGA GAATTTCCAG AAGTAACTA	6420
TTGGACAACC TTAAATGAAA TTGGACCAAT CGGTGATGGT CAATATTTGG TTGGGAAATT	6480
CCCTCCAGGT ATCCAGTACG ACCTTGCCAA AGTCTTTCAA TCACACCACA ATATGATGGT	6540
GTCTCATGCA CGCGCGGTAA AATTGTACAA AGAGAAAGGC TATAAAGGGG AAATTGGTGT	6600
TGTTACGCC CTGCCAACTA AATATCCTCT AGATCCTGAA AATCCAGCAG ATGTTCGTGC	6660
AGCTGAGTTG GAAGATATCA TCCACAATAA ATTCATCTTA GACGCAACTT ATCTAGGTCTG	6720
CTATTCAGCT GAAACCATGG AAGGTGTCAA CCATATCTTA TTAGTCAATG GTGGTAGTTT	6780

1126

GGATCTTCCT GAAGAAGATT TTACAGCATT AGAAGCTGCA AAAGACTTGA ATGATTTCCT	6840
AGGAATCAAC TACTATATGA GTGACTGGAT GGAAGCCTTT GATGGAGAAA CTGAAATTAT	6900
CCATAATGGT AAAGGTGAAA AAGGAAGCTC TAAGTATCAA ATCAAAGGTG TTGGTCGTCG	6960
TGTAGCTCCT GACTATGTAC CACGCACGGA TTGGGATTGG ATTATCTACC CTCAAGGTTT	7020
GTATGACCAA ATCATGCGTG TGAAGAAAGA TTATCCTAAC TACAAGAAGA TTTACATCAC	7080
TGAAAAATGGT CTCGGCTATA AAGATGAGTT CGTTGATAAC ACTGTTTACG ATGATGGTCG	7140
TATTGATTAC GTGAAGCAAC ACTTGGAGGT TTTATCTGAT GCGATTGCAG ATGGAGCTAA	7200
TGTAAAAGGT TACTTCATTT GGTCAATTAAT GGATGTCTTC TCATGGTCAA ACGGTTATGA	7260
GAAACGTTAT GGTCTCTTCT ACGTAGATTT TGAAACTCAA GAACGTTATC CTAAGAAATC	7320
AGCTCACTGG TACAAGAAAAG TAGCGGAAAC TCAGATTATA GACTAGTAGA ATTAGTCATT	7380
AGATATAGAA TTTTAGTGAG TCAAAAAGAT GTTCAAAGAT TTTATCCAAT CTATTTATGA	7440
AAAAAAGTTT ATATTATAAA TTTGAAAAA TGCTCTCAA TACCGTGTTC GACGAGTGAA	7500
GAATTGAAAA GTCTTGCAAA ATGGTATGTC TCGACTGCTA AAGAATGGAT TTGTCATTCA	7560
GATGATGAGC TGGAAGAATT TAAAAATCTA TTTTAAATTT TTATCAATCC TGAAGAATGG	7620
GATACTATCT CCTTTGATTC AGATTTTATG CCGTTTCAAC AATCGTAACC AATTTCTCAA	7680
AAAAGTTAAA TCTTATATTT AGTACTCTGT AAAACTCTTA TCTAATCACG TTGCTTATAC	7740
TCAATGAAAA TCAAAGAGCA ACTTTAAACT AGGAAGCGAG TCGCAGATTT CTCAATGCAT	7800
AGCTTTGAGG AATTGGGCAA AAAGTCTTTG ATATAGAAAA ACGCATAGTA TCAGGTGTTT	7860
CAACACCTGA TACTATGCGT TTTATGTGG GAAGATTAC TTTTTCCTT CTGAAATTGA	7920
GTGTGTACCC AGGCTCTTTC AGTTTATTAA GGCTTGATGA CTTTAATGTG TTTAGATAGC	7980
TTAAAAAGGA TTGAATCACT TAGTTTAGAA TCTGAAACAA TAGTATCAAG ATTTGATACA	8040
TTATAAAAAG TATAAAAATC AAACCTATTG AACTTGCTAT GATCTGCGAG TAAATATTTT	8100
TTATTAGAAT TATTTAAAGC GATGCGTTGA GCCTCTCCCT CTTCTCGCT AAAAGTAGCT	8160
AGAGCTCCGT TTTGAATACC ATTACAGCTA ACGAAAGCTT TAGAAAATTG GAGATTAGAG	8220
AGATTTTGTA GGTCAATGT ACCAACAAAA GCACCTGTAA TATCGCGATA ATTTCCACCT	8280
ATTAAAAATCA AATCTGTTAA TTTTCGTTTC CTAAAAATCA GAAAAACAGG TAGACTGTTG	8340
GTTACGACGC GGATATTGTC AATAGGCAAC TCACGCGCAA AAAACTCTAA TGTGTTCCT	8400
GGTCCAATGA AAATAGTTTC TCTTTCTTCT ACTAGACTGC CTGCAAAATG GGCTATTTCT	8460
TGTTTTTCTG CCGTTTGAGG GGCTTGTTTT TCAATATTTG ATCGCTCATT AGTCAAAGG	8520
GAGTTGGTTC GAAGTTTTTC AGCTCCACCA TGCACACGAA TCAGCAAATC TTTATCAGCT	8580

1127

AATTCCTGTA AATAGCGCCT TGCAGTCATA TCTGAAACGG CTATTTTCGTC CATAATCTGT 8640
 TTAAGTGTGA T 8651

(2) INFORMATION FOR SEQ ID NO: 182:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3786 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

AATCTCCAAT CAGTGCCACT TCAGCTACAA AGAAGAGGAG GATAATAACT CCGTTCACAA 60
 GGACAGACAA GAATAATTGA TAGAAGGAGT CGGTTTCACT TGCTTGACTT GGTCTTGTA 120
 TGATWTGGAG ACTGGCAAGC AGAATGATTC CAATGCTAAT CACACACAAG AGGGCTGTAA 180
 ATCGTAGGCT ATCAAAGAAA GCAAAGAAAC TAGCAATAGC AGTGAGGAmG ATTGGAATTG 240
 CCAAGAGTTG ACTATATTGT TGGAGAACCT TGTCTAGCGT CCAGTCCTTT TCCTGGTGGA 300
 TAAATCGTCT CACAACGAAA CTACCCAAGA GGAATGAAAA GAAGAAGAGT GTTGTGCTTA 360
 CTAGGATAGA GATGATAGAA AAAAGAGTTA AAGGAGCTAG CTGCTCAGGG AAGCGACTGT 420
 TAATGCTTGC TATATGTCCA TAGTAAGCAT GTTTGATGTG ATAGATACTA AAGAAAAAGG 480
 AAGATGCAGA AAACAGAATG AGCAAGAGAA AGGCTGTGTA ACTGTGTGTC ATACTTGTTT 540
 CCAACTTACT TGTAGGAGAT TTGATCGCTT CCACTAGCCA AGACCAAAAA TCAAGCACTT 600
 GCTCTTTCCA TTTATCCCTA GATTTTGGAG CTTGGTCGGG GATATAAGGA CTTTCTAAAG 660
 ATTTACTGAT AAGAAGTGGC TCTTTCGTGG TTGCTTTTGG CTGAGGAAGA GCTTCTTGCC 720
 TCTCTTCAGC TATAGTGAAT TTTTCTGTTT CTTTAGAAAG GTCTGGCTCT TCTTCAGTAG 780
 AATTAGATGC CTTCTTTTCT TCTATTTCTG TTCTCGCTTC ACTGTCTTCA GGAGCTTCAA 840
 TTTTCTCTTC TTGCTGGCTT TCCAATTCGA CTTGAGCTTG AGGGACTTCC TCCTCTAACT 900
 GAGTATTTTT TTCAATTGGT GTATCGAGAT CGGCTATCGT TTCTTCAGCC TTGTCTGCAA 960
 CCTCTTGAGC TTGCTCTTCA GGCTTGTTCT TGCTTGTGTG TTTTACAAAA TCATTACTTT 1020
 CAAACCATTC TTGTTTCATG GTAGAACCCT CTTTTTAGTT AGATAAATAT GTTTCCATAG 1080
 TAGCAAATGT AAGCGTTTTT GTCAACGTCT GCTTGGTGTG GATATTAGAT CAATATTATC 1140
 ATCAGATCTC GCAATGAGTT GATCCTTGAC ATCGGTTTTT TCAGTTTTGT AAGGGTTGCT 1200
 TAATCCGTA CCTCTTGATT CAGGCTTTTC TCTGTGAAT TGGAAGATAG AACCATAGTT 1260

1128

GCTTGAGATG TCCCAGTTAA TTCGTTGGCT TTCTTTCTGG TCTAGGATGA TTCTGAGATA	1320
ATCTTTGGCA GTCAGTTCAA CCTTGCCCATG GACTTGGATA TTTTCAGCGT GGAAGTGATT	1380
CTCTGTTGAC TCTAGCTGAC TATCTGTAAG AACTGTATCA AAGATATTAA CGATATTGGG	1440
CGTTGTGAGT TTACTGTTTT TGATACGACT TCCTTCAATT CGGAGGATAT AGCTGTTTGT	1500
ATTGAGGGTC GCATTTTCAA GGCTAGCATT TATGATGGTG GTTTGTCCGC GATTGGCTGA	1560
GATGTGATC CCTTTTAGAG TTCTCCCTTT TGGTAGTCGG AGAATAACTT CTTCAAAACG	1620
ACTAGAGTAG CTACTTGCGA TATGAAGAAT CCCACCAATT CCAGAAGAGA GAAACGGAGT	1680
TTCAGACAGT TTCTTATCAG TGAGACTCAG AGTTCTATCG TTCTGATTGG TGATAAGATC	1740
ATGGTGAGCA GAAAGAGATG GATGGTAAGA AATGTGGATT TGATCATCGA AAGAGTCTGT	1800
GATGGTGAGC CTGTGTTGGT GGAGAGTAAT TTCTAGGTTT TCGACTTCCT TGCCAAAGGT	1860
TAGCTTTTCC GTACGGCTAT CATAGACAGG TTCTTTGGAC ATGGAAAGTA GGCTCTTAAT	1920
CCCCTCAGAT TGGATACCTA CAAAAAGCAG GATAAAGCCG ATAACGCTAG TCACCACACC	1980
AAAGATGAGA AATCCTTTTG TCCATTTACG CATGCTGATT ACCTCTCTTT CCTTTTTTAA	2040
GAACAAATTG TACCAGACGA ACAATGAGTA GACCGAAGAA GCGAGTTGCA TAGGAAATGC	2100
CAAGTAAAAC TAGCGAAGAA GCACCCATAG CCAGTAAACC AGAACCAGAA ATCAAGATAA	2160
AGGCTGATTT GGCTTGGGCG AGGACAGTGA AACTTTCAAC TAAAAATAGG AATCCGCCGA	2220
TGATACCCAG TATGGAAACT GCAAAGAAAG CCAGAATGAC AGTCAAAGCG GCTACAAGAA	2280
TTGCGAACAG GGTACAGAGG ATGGCGATTG CCAGAGGAAT GCCGATAGGT GCTGCAAGGA	2340
GGGCTAACAA GGCGATATGT AAAATTTGTC GGTATTTTTT TTGAGCGGGT GCTTCATTGA	2400
TTTTTTTATC GAGAAGATTG GATAGAACTT CGTGGGCCGC TTCTTTGGGA GTTCCCAAAC	2460
TAGCGATGAG TTCTTCTTCT CCTTCGACTC CAGCATCGTC AAAGAGCTCT CTGAAATAGT	2520
CCATGGCTTC GATACGGTCA GCTTCAGTA GTTCTTGAG ATAGAGTTCT AGCTGAGTCA	2580
GGTATTCAGT TCTTGTCATG GCGGATACTC CCTTCTATGA TGCCATTGAT GGTGTCTGTA	2640
TAGAGTGCCC ATTCATCTTT TAGGGTCAAG AGCTGCTCTA TACCACCGTT TGTCAAGGAG	2700
TAGTATTTGC GCATGCGACC TTGGAATCT CTAGAATAGG TTGTCAGAAA GCTATTGCCT	2760
TCCAATTTTT TGAGAATGGG ATAGAGTGTG GATTCTTTGA TATTAGCGAT CAGCTTAATG	2820
GTTTGGCTAA TCTCATAACC ATAAGAATCA CCCTGCTCCA GTACAGCCAA GATGAGAAAT	2880
TCAATCAAGG CAGAGGATGT TGGAAAGTAC ATGGGAAACC TCCTTTTCTA ATGTGTAAGA	2940
TTTTTATATA TAATTTTCT ACACATACAT TGTACATCTA AAAGAAAGCC CTGTCAAGAG	3000
AAATGTGTAA AATTTTTATA TATAAAAAAC TTCTAGCTAA AACTAGAAGT TTAAAGGATC	3060

1129

TTATCCGCTC TGTCCACTGT AAAGAGGGCC ACAGTCATCA GGATATCGAT GAGCAAGAGG	3120
GCAGCTACAG ATGGTACCCA AGAGTGAAC ACGTCAAAAC TCTAACCAAA GAGGGTTGGC	3180
CCAAAGGCTG CTAGGATATA GCCTCCTGTT TGAGATAGGC CGGACAATTG GGCTGTCTTT	3240
TCAGGGGCGC TTGTCTTGAG TGAAAAGTTG ACCATGAGAT AAGGGAAGAG GGCACGTGTT	3300
GCGGTTCCGA TGAGGAGATG GATGGCAAGC CAGTAAATGA AATTATTGAT TGGGAAAAAG	3360
AGCATGGAAG TGCCGACCAC ACCAGCTAGT GAAACCAGAG TGAGCATGAG CTGACGGTTG	3420
CGAGTAGATA AACTGGTTGT CAGGCTTGGG ATGGTCATTG AAAAAGGAAT GCTAATCAGA	3480
GATAAGATAG AAGTCAGCAA GCCAGCTTCG TGAAGGATA GACCTGCATG GATAGACATG	3540
GTAGGTAACC AGGTCATGAC GGTGTAAGAG ATCAAGGATT GAAAACCTGA AAAGATAATA	3600
ATTGCCCAAA CCTGTTTATT ACGCATGACC TTTATTTGAC TTTTGTGTTT GGTGTTGGA	3660
GCTAGTCTAT GATTATAGCG GTGATTGGG AGCCAGACCA AAAAAGTTGC TAGACAGAGT	3720
AACGTGAGGA GAAGGATAAG TCCTTTCCAA GAACTGGCTT GTGTAATGGG CACAGCTAGA	3780
TAGGAA	3786

(2) INFORMATION FOR SEQ ID NO: 183:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3054 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

TCAGCTAAAA AACATTGCTA AATTGATTGA AGCTGGTGCT ACACATCCG ATTCAACTTC	60
TCACACGGCG ACCACCAAGA ACAAGGTGAG CGTATGGCAA CTGTTAAACT TCGGAAAAAA	120
ATTGCAGGTA AAAAAGTTGG TTTCCTTCTT GATACAAAAG GACCTGAAAT CCGTACAGAA	180
TTGTTGGAAG GTGAAGCTAA AGAATATTCA TACAAAAGTG GTGAAAAAAT TCGTGTGCA	240
ACTAAACAAG GAATCAAATC AACTCGTGAA GTGATTGCGT TGAACGTTGC TGGTGCTCTT	300
GATATCTATG ATGATGTTGA AGTTGGTCGT CAAGTTTGGG TTGACGATGG TAAACTTGTT	360
CTTCGTGTGG TTGCTAAAGA TGATGCAACT CGTGAATTG AAGTTGAAGT TGAACACGAT	420
GGTATCATCG CTAAACAAAA AGGTGTGAAC ATCCCTAACA CTAAATTC TTTCCAGCT	480
CTTGCTGAAC GCGATAACGA CGATATCCGT TTCGTCTTGA AACAAGGTAT CAACTTCATC	540
GCAATTTTCA TCGTACGTAC TGCAAAAGAT GTGAACGAAG TTCGTGCAAT CTGTGAAGAA	600

1130

ACTGGAAACG GACATGTTCA ATTGTTTCGCT AAAATCGAAA ACCAACAAGG TATCGATAAC	660
TTAGATGAAA TCATCGAAGC AGCTGATGGT ATTATGATTG CTCGTGGTGA TATGGGTATC	720
GAAGTACCGT TCGAAATGGT TCCAGTTTAT CAAAAATGA TTATCAAGAA AGTCAATGCT	780
GCAGGTAAAG TTGTTATCAC TGCAACAAAC ATGCTTGAAA CAATGACTGA AAAACCACGT	840
GCAACTCGTT CAGAAGTATC AGATGTATT C AACGCTGTTA TCGACGGAAC TGACGCTACA	900
ATGTTGTCAG GCGAGTCTGC AAACGGTAAA TACCCACTCG AGTCAGTAAC TACAATGGCT	960
ACAAATCGACA AGAACGCTCA AGCTCTTCTT AATGAATACG GACGCTTGA TTCAGATTCA	1020
TTTGAGCGTA ACTCTAAGAC AGAAGTAATG GCTTCTGCTG TTAAAGATGC TACTAGCTCA	1080
ATGGATATCA AATTGGTTGT AACTCTTACT AAGACAGGTC ATACTGCACG TTTGATTCTT	1140
AAATACCGTC CAAATGCTGA CATCTTAGCA TTGACATTG ACGAATTGAC AGAACGTGGC	1200
TTGATGTTGA ACTGGGGTGT TATCCCAATG TTGACAGATG CTCCATCTTC AACTGACGAT	1260
ATGTTTCGAAA TCGCTGAACG TAAAGCGGTA GAAGCAGGTC TCGTTGAGTC AGGCGATGAT	1320
ATCGTTATCG TTGCTGGTGT GCCAGTAGGA GAAGCTGTT CACACAAACAC AATGCGTATC	1380
CGCACAGTAC GTTAAGAAAA ATATAAAAAC CTATCATATC CAGCTTTAGA GCTTGTGTGA	1440
TAGGCTTTT GTATAGAGGG TAAGAAATAG GCAAACTTT CATAATGGAT TGATACTCTT	1500
CGAAAATCTC TTCAAACCAC GTCAGCGTCG CCTACCGTA TATATGTTAC TgACTTCGTC	1560
AGTTCTATCT ACAACCTCAA AGCAGTGCTT TGAGCAACTG CCGCTAGCTT CCTAGTTTGC	1620
TCCTTGATTT TCATTGAGTA TGAAATAAGA TATGCACAAA TTGATTAGAA AGTCAAATGA	1680
ATTTCTACAA ATGTTTTAGC AATCGTAATG TACTTGTCTA GATTCGATCT GATATATTTT	1740
CGATTTAATG ATATGGTATT TAAAACCTCC AAAGTAGCTT ACTCCATCTT TTTACTTACG	1800
TGAGTGTAGA TGTTATTTAC TGTTTTAGCG TTTTGTGTT CCACTCTAAC CATTTATAGCA	1860
TTCTTCTCAG CTAGTGTACT AAGGAGTGTG TGCCTGAAA TATCGGAACT AAGGGGCTGG	1920
TTTATCGGTT TCTCTAGTTT AGTATTTGCC TTTTGCAAAG TGATCTTAAA TGCCTTTCTC	1980
TAAATTTACA TATCACTATT GTTTAACAAA ATCTAATCTA TTTTAGGTCA CTTATTCTTT	2040
TTTTGAAATG TAGAATGAAC TTTTTCAAAG TTTTTCGAAT CTTTAAAAAT CTGTTTGCTT	2100
TATATCGCCA TTCTCCCCC TTTTTTAATT CTCCCTATAT AGCCTGACAG CTTTCCCGAT	2160
GGTACGAATA TGGTGCTTT CGTCTAGGTG GATCTCGGG TATTCGGGAT TGAGTTTTTT	2220
TGAGGCAGCC TTGGCGGAGT TTCTTGACAT AGTTAGTGCC GTCTACTTGG AAGATGCCGA	2280
TGGTATTATA GTCAATCTGT GGGGTATTCT TGATAAATAG GTAGTCGCTG TTTCTTATCT	2340
TTGGCTCCAT GGAATTGCTG ACGACATAAG CGATTGGGTC GTAGTCGCTT GGGATAATGG	2400

1131

AAACTCCATA TCTAAATCGT TGTCCTGCAT CGAGCGGCTA CCTGCAGAGA TAAACTACCT	2460
AACACGAGAG TAAGTAGTCT GTCTGTAGTC GTCCAGTCTG ATGATTTTTA CGATACTTCG	2520
TTTTTCTGAT CATACAGTTG CCTCTCGGCA TAGGTCAGAA CTTTACCTTG TCTGGGTGGT	2580
TCCCGTTGGT CGTAGATAGA TTGGATATCG CTAGGAGAAT CCTTTTGAAC TGGAGGAAAG	2640
AGGGCATCGA TCAAGCTACT GAATACTTTA ACTAAGTCAA ATATAGTATT TTTCTTAGTA	2700
GACCTAACCC TTTTTCATA ATTTCTAATG GTGTTTTTAC TTATACCTAT CTTAGTACCC	2760
AATTCTTATT GAGTCCAACC ATTACTAGTC TATATTGTTT TATAGTTGAT TGAGTTTGGT	2820
ATAGTACGCT GTAGCTGCTA AAACATTTCT AGAAATTAAT TTGACTTTCC TAATAGAGTT	2880
GATCATATCT TATTTCAATC TATTATGTTT TTCACCTCTA ACAATCGCAA TCTCTCTTTT	2940
ATCCATGAAT GAAATCGCTT TCTATTTTGT TAAGTAAAGC ATAACACGAA ATCCACGAAA	3000
ATGAAAACCT TTGTTGTGTT TTCGTAAAAA ATTTGTTGAC AGAGCACGAA ACGC	3054

(2) INFORMATION FOR SEQ ID NO: 184:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 1590 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

TGTGATTTTC yGAAAATTTG GTAAAATATA TCTTAATCAT TTTCAGGAGG AAAAAATTT	60
GACAAGATAT CAGAATTTAG TAAATGGAAA ATGGAAATCA TCTGAACAAG AAATTACGAT	120
TTATTcACCA ATCAATCAAG AAGAATTGGG TACAGTTCCA GCCATGACTC AGACTGAAGC	180
TGATGAGGCT ATGCAAGCTG CGCGTGCAGC CCTGCCAGCA TGGCGAGCTT TATCAGCAGT	240
TGAACGTGCG GCTTATTTGC ATAAAACAGC AGCTATTTTA GAACGCGATA AGGAAGAAAT	300
TGGTACTATC CTTGCCAAAG AAGTAGCAAA AGGGATTAAA GCAGCAATTG GAGAAGTAGT	360
GCGTACAGCA GACTTGATTC GTTATGCTGC TGAGGAAGGT CTCCGTATCA CTGGACAAGC	420
AATGGAAGGT GGTGGSTTTG AGGCAACAAG TAAAAACAAA CTGGCTGTTG TCCGTCGTGA	480
ACCAGTTGGT ATCGTGCTAG CGATTGCTCC CTTTAATTAT CCAGTTAATT TATCTGCTTC	540
TAAAATTGCA CCTGCCTTGA TTGCAGGGAA TGTGGTCATG TTTAAGCCAC CAACACAAGG	600
TTCCATTTCT GGACTCTTGT TGGCTAAAGC ATTTGAAGAA GCAGGGATTC CGGCAGGTGT	660
TTTCAACACC ATTACAGGTC GTGGTTCAGA AATTGGGGAT TATATCATTG AGCACAAAGA	720

1132

AGTCAACTTC ATCAACTTTA CAGGTTCAAC TCCTATTGGA GAACGTATTG GTCGTTTAGC	780
TGGTATGCGT CCTATCATGT TGGAACTTGG TGGGAAAGAT GCAGCTCTTG TACTAGAAGA	840
TGCAGATTTC GAACATGCTG CCAAGCAAAT TGTTCGGGA GCCTTTAGCT ACTCAGGACA	900
ACGTTGCACG GCCATTAAAC GTGTCATTGT TCTCGAAAGT GTAGCAGATA AATTAGCTAC	960
TTTGCTTCAG GAAGAAGTTT CTAAATTAAC AGTTGGTGAT CCATTGACA ATGCTGATAT	1020
TACACCTGTT ATTGACAATG CTTCAGCCGA CTTCAATTGG GGCTTGATTG AGGATGCACA	1080
AGAAAAAGAA GCTCAGGCTC TTACACCAAT CAAACGTGAG GGCAATCTTC TCTGGCCAGT	1140
GCTTTTTGAC CAAGTTACAA AAGATATGAA AGTGGCATGG GAAGAGCCAT TTGGTCCTGT	1200
TTTACCAATC ATTCGTGTGG CTAGTGTAGA GGAAGCTATT GCCTTTGCCA ACGAATCTGA	1260
ATTCGGCCTT CAATCATCAG TCTTTACAAA TGATTTCAAA AAAGCCTTTG AAATTGCTGA	1320
AAAACCTGAA GTAGGTACAG TCCACATTAA TAATAAAACC CAGCGTGGTC CAGATAATTT	1380
CCCATTCCCTT GGTGTCAAAG GTTCTGGAGC TGGAGTGCAA GGAATTAAAT ATAGCATTGA	1440
AGCGATGACA AATGTCAAAT CCATTGTTTT TGATGTGAAA TAACGTGTAA AACCAGGAAA	1500
TTGTTTTCCT GGTTTTATTT TTTTGCTATA AAATAATAAT AATTATAGAA AAAATACGAA	1560
CTTTTTGGTA TTATAATAGA TTGAAACCGG	1590

(2) INFORMATION FOR SEQ ID NO: 185:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4848 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

CCTGCAGTTG TCAGACCTGT AATTTCTTTT TTATCTGTAA TAAGAATCGT TCCAGCGCCT	60
AGAAAACCCA CACCTGATAT AACTTGAGCT CCTAATCGTG TAGGATCTCC TGTCCCAAAT	120
TTATAAGATA CGTATTCATT CGTCATCATA ATCAAACATG CAGCTAGACA AACAATACTA	180
TAAGTTCGGA TGCCTGCAGG CTGGGATTTG CTCCCTCTCT CTAAACCAAT TATACTACCA	240
ATGACTACTG ATAAAACAAT CCTGACAACT ATTTCAATAT TTGATAACCC AAGACTAGTG	300
GCTGTCATGA TTATTTCTTT ACTTTACGCC CCGGTCTTTG TGTGAAGTAT AATACCGTTC	360
CAGAAATAAT CATCAGAACA ATTGATATAA CAAATACCAG AGCTTGTGCA TTAGATGTTG	420
CTGTTTCATC ACCTGCAGAT CGAATCGTAA TACCTAATGG TTGAGCTAGG GGATGGTAAA	480
GGAATACAGA TAAGTCGAAG TCAGTTAATA AAGAGTTAAA GTTTAAAGCA ATAACAGAGA	540

1133

GAACAACCGG TAAATAAAT GGAATGATAA CCTTCATCAT AGTATAAAAA GGTGAAGCAC	600
CCATACTTCT TGCTGCATCT TCCATCTCAT CATCAACACT AAATAAAATA GCACGTACCA	650
TTCTATAAGA AAATGGGATT TTTACAACTA TATATGCAAT AAGTAGAATT ACCAACTAC	720
CTACCAAAAT CTGATTCAAG ACAAGAAATT GTGGCTGATT AAAAGTAAAT AATAAACTTA	780
CTGCTAAAAG TGTACTTGGT AGTAACCAAG GAAGTAGAGC ACCATATTCA AATAAGAAAT	840
CAAAACGAGA TTTATGTTTT CTGACAACAC GAGCAAATAC AACTGCGAGA ATTGTTGCTG	900
TTGTCGCAGC AATAATAGAA TAAATAAAGC TGACCAAGAA TGGAGAGAAT GCCGCACTAT	960
TACTAAAGAA TAAGCGATAA TTTTCTAAAG TAAAGTTTGA TAATGTTAAG TTACCTGTTT	1020
GAATTGCAAC TGGATCTGTA AATGAGTATA ATACTATAAA AATTAGTGGA AGCATGAAAA	1080
CTGTGAACAA TCCATATGCT ACAATGTGAG CAATGATATT CCAAGGCTTA GACGCAATTT	1140
TTTGTTTTTT AAGAGGCGCT TTAGTCTTAG AGATAGAAAT ATAATTTCUA CCTTTTCTTA	1200
TCTATTTCAT GATAGTAAGC AAAATTGTAG TTGCAATACC TAAATAAATT GCAAGTAGGG	1260
CAGCTAAATC ACGAGAATTC CCCATCCCTG CAAATGTAAT AATCATTGGA TTTATAGTTT	1320
GAAATTCTTT ACCACCAACA ATCATGGGTG CTGCTACTGC AGATAAACCA CTAAGAAAAA	1380
CCATAATAGT AAGTGCAAAT AGAGTTGGAA TTAAGGTTGG TAACACTACT TTTCGGAAAA	1440
CAGTAAATGG TTTTGCTCCC ATATTTCGAG CAGCCTCAAT AGTGTGATAG TCAACGCTTC	1500
GAATTGTATT TGTAAAAAC AATGTATGAT TAGCAGTTCC TGAAAATGTC ATAATGAATA	1560
AGACTGCACC ATACCCAATA AACCAGTTAG GGTCTAAAGA AGGGATAACA TTTTGTAAAA	1620
ATTTTGTAAT CAATCCATAA GGACCATAGA CAAATTTATA TCCAGTCGCT AAAACCACTC	1680
CTCCATAAAT TAAAGAGGTC ATATAACCTA ATTTTAAAT TTTAGCACCT TTAATATCAA	1740
AGTACTCTGT AAATAGAACA CAAAGAATAC CTACGACATT AACTGTAATA ATGAGTGAAA	1800
ATGCTAACTT AAAACTGTTC ATAATACTCT GAAGTGCCCT CTGAGATTTT AGAACACGAT	1860
GTACAGCATC AAGGAAAAT TCTCCTCCTT TTACAAATAC ATTCACTACT AGATCAAAGT	1920
TTGGATAAAT AATAAATGTT ACTAAGAACC AGATTAACCC TAAACGAATA AGCCAATCTT	1980
TTAAATTTAA TTTATGACGC ATACTGCACC TCCTTAAAT TGCAGAACGT CTGATGGTGT	2040
GATAAATAAT TCCACACTTT CTCCGACAGA TCTAATAGCA GCCTGACTAT CAATACTTGT	2100
TACATTAAGA ATCTGACTTT CAGAACTTT TATTGTATAG TGAATTGTAA CTCCAGAAAA	2160
CTCAACATCA ATAATTGTCC CTTTGAAT AAAATCTTGT TCAGTTTCAC GATTGAATCG	2220
AACTTTCCTT AATCGAATGT ATCCTTTTTT ATCCTCTAAG AAAACGCTTG TATTTTCAA	2280

1134

TAATACTTCG TGGACTGTTT CATCGGTCAA AACATTAATA TCTCCAATAA AATCACATAC	2340
AAATTCAGTT TGAGAATTAT GATAAATCTC TACTGGTGTA CCGACCTGTT CGATGTATCC	2400
ATTGTTAAAG ACTGCAATTC TATCAGATAA AGTCAAGGCT TCCTCTTGAT CATGAGTAAC	2460
ATATAAAGTA GTAATACCTA ACTCTTTTGG AAGTCTTTTC AACTCTTTTC TCAAATCTAC	2520
ACGTAATTTT GCGTCAAGGT TTGACAATGG TTCATCTAGA CAAAGAATTT TAGGTTCAAG	2580
AACCAGAGCA CGAGCCAATG CTACCCTTTG TTGTTGACCC CCAGATAATT CTGATACATT	2640
ACGCTGTAAC TGTGTATCAG AGATCTTAAT TTTTGCTGCC ACTGCTGATA CTTTAGCTTT	2700
AATAACATCT GGAGCTACCT TCTTAACCTT TAAACCAAAT GCAATATTAT CAAAAACAGT	2760
CATAGTTGGA AATAGCGCAT AAGATTGAAA TACAATACCA ATTCCACGCT TTTCAGGTTT	2820
CAATGAGTG ACATCTGTTC CATTAACCTC AATACTTCCT GATGATGGAT CTAGAAAACC	2880
TACCAATGCT CTCAAAGTAG TTGATTTACC ACATCCTGAA GGCCCAAGAA ATGTAAAAAA	2940
TTCCCCTTCA TGTATATCTA AATTCAGATT ATCAATTGCA ACAAATCAC CATATTTAAT	3000
TTGAATATTA TCAAATTTAA TCATCTCACT AACTCCCTCT ATTACTAAAC CAAAAGCCTC	3060
TCTTTATTTC TTCCATAAAT TTAGAAATAA TAGAGAGACT TGGACATAAA AATTAACTCT	3120
TATTTCTTAT TGTACGTATT CTAATTCAGC TTTTCTTACC CATTCATCCA AATGCTTTCC	3180
AACAGCTTCC CAGTCAATAT TTTGTGGTTT CACTTGATCA ACAAATTTCT TCGTATCTTC	3240
AGGTAGATCT TTGAGGGCAT CTTTATTTGC AGGAATAGAT CCAAAGTTCT TACTATATTC	3300
TACTTGAATT TCTGATTGAC CAAACCAATC AATAAATCTT TTAGCTAACG CTTGTTTTTT	3360
ACTAGTGCTT AAAACCATAG TTTGTTTCAGT TACAAATGGT ACACCAATCT CAGGAGTCAT	3420
AACTTTGAAA ACAACATTTT GTTCTTTTTG TCCAACATAAT GCACCAGAAC CCCACATCAT	3480
TCCATATTGT ATTGGATCTT CTTTGTCTAA CATCTTAACA ATTGAACTTT CTCCCTTTTG	3540
AAGAGTGTAT GCATTTTCA AATAATCTTT TGCTACTTCC CAACCTTTTT CGGAAACACC	3600
TAATTCACCT TTATCATCAA GGTATCGAAC TAAGATACTT GCTAGAATTG CCCGTCCTGT	3660
ACCTCCTTGA AGACCAGAAA TTGAATATTT ACCTTTATAC TTACTACCTA ATTCAGTCCA	3720
ATCTTTAGGC ATTTCTTTTA CATCAGGCGC CCCAATTAAA ACTAATGGTT GAACAATCAC	3780
AGGATTATAA TAATTATCTT TATCTGATAA AGATTGATCA ATTTTATCTA ACCATTTAGG	3840
CTTGTAAGT ACTAGTAATT TTTGATCTCT AATTTTATTT GAATCAACAG CACCAATTCC	3900
AAATACCATA TCTGCAACTG CATTATTTCT CTCAGCAATA ACACGGTCTG CTAATTGAGC	3960
GCCAGCGATA TCAACCATTT TTATATTAAA ACCAGCTTCT TTTGCTTTAG CAGTTAACCA	4020
ATCACCACGA CCATTTGAGA CTGAGTTCGA ATAGATAACT AATCTTGAC TTTTATCAGC	4080

1135

```

TTTTTCTTCA GATGAAGAAG CAGTCGTAGA ATTTGAACCT CCAGAGCAAG CAGCAAGTGT 4140
AGTAAGAGCA ACTCCCGTTG CAAGTACAGT AGACCAAACCT TTCATTTTTT TCATGATAAG 4200
TTCTCCTTTT TTATTATTTT ATTTAAATTT TTCGTGATAT GGAACAAATT GTCTCATATC 4260
TTCAAATACA GTATAGTCAA TACGGTTTAC AGTAATAGTT GGAATCTTCT CTAATAAAAT 4320
TTCAGTTAAT TCTGCTCTGA CTTTAGTAAA CTCTTCTTCC TCCTCTTCGG TTAGAGGAAT 4380
CCGAAGATAC CCAATTGAAA TATGGAATTG ATATCTATCA TGATTAGGGA AACAAACACC 4440
TGCTTTTTCT GAGACATAAG TACGAATTTC TTCTAATCTC TTTGCAGAAG CTTCATCTGC 4500
AGGTTCACCT AGTATGTTTT GTTTTCCCAT TTCAGTTATA CGCATATGAA TTTCTTCATC 4560
CAACAATGGA AAAATTTCAA GTTGTITAGC AAAGTAATCA TGTATTTCCCT GTAAAGGTGT 4620
ATCTAGAGGA AGATTACTGC TCCAAAACTC gtTCACGATT TTCATGGCAC AACAATTCAA 4680
TTACAGTCAT GTGAATAGAA TTCCTTGGAG TTAAAGTAAA CTTATCGATA AATGGTAATT 4740
CTCTATAACG TGATTGAATA ATATCAACAA CTTCCATCAA ATCTTGTTTA GTATAAAGAT 4800
TTGCTACAAC TGTATTCCCA GGGAAATGAT TAAATTCCCC ATTCTCGG 4848

```

(2) INFORMATION FOR SEQ ID NO: 186:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3763 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

```

GTTATAAGCA ACACCTTCTT GCTTGCCATA AGTTGTGAAA TGGGTAGAAT CGATATCTAC 60
AATGAGTTGG TTTAGCTGGT GAAACTGTAA AAAGAATTGG ACCAATTCAA GCTTGAGGCA 120
TCGCAAACTA TGGACTGTTT CCTCGTCAGT TCTGGAAAGA AAACGGGATA AGGTGGCTG 180
TGAAGCAAGC TGCCCTCCTT CCAATAATTT TGGAAAGTAG GCATCAGCTG ACAATTCCTT 240
ACAAGCATAG TCCGTTCAT AACCTGTAA CAGTTGAAAG AGGAAGTGA CAAGGATATC 300
TGAATCCGAA TAACGACAGT AGCGGCGTTG GTCATTCGTT ACTAAATACT TAGAAATCCG 360
CTCTTTTAGT TTCAACTGGG AAAAAAGTTC CTGAAAAAG ATAAGACCAC CATACTGGGT 420
TAAATGACCT CCATCGAAAG ATAGTTGGTA AAAAGACTTG TTTTGGAAGT GATGATTTGG 480
TAAACTGTTC ATGTGAGTTT CTTTCTTTT TGTGTTTTTT TCTACACTTA TACCATAAAG 540
GGGAAACTCT TTTTGTCTA GTAAAAACA CCCATTGGGT GAAAAAGAA ACCATCCAGG 600

```

1136

ATCTAAGCTA AGGCAAGGAT TCTGGATGGT TTTTAGATTT GGGGTGAA1A ATTGGGGATT	660
TAGGAGAAAT GATGGTATCT TCCAAATCAA AATCAACTTC ACTCCATAGT CTCAACTGAT	720
TGATTTTCCC ATCTTGATAG GTCACATCCT TGTCAAGGAT AAACCTGAGTC AACACCTCAT	780
GTTGACCTTG ACACCTGATG TCATCTACCA AGAGCCAGAC ATCCTCTACC AACATGAGGA	840
TTTTTCTCCT GTGAAGATAA GGCAAATCAG GTTCTGCTGA CCAATAAGCC CCCTCAATAT	900
AATGCACTCC CTCCTTTTCT TTATGGTGAC AAAACAGGGA GTGAGGATAG TATTCATATT	960
CCCAGGATCC CGTGATTCTT TCCGGAGCTT TCCCATCTAC AATGCAGGTC GAATGACTCC	1020
AAGCACTCTT TAAGAGATAA CGTTCATATA TCTCCCGATA AGAATAACGC CCAGCATCTA	1080
TGAAAATAGG TTGGCCTTGA TACTGTAAGC AAAAATATT CTCGTCACCTA TGACTATGGG	1140
CAC1TCCTAG CGGACCATT1 TTGAAAAATA GATAACGATG TTCATCCTTA ATGCAGACAT	1200
GTCCAGAGTC TTCAAAGATC ATGGACTTAG GCTGCCAAGC TCTCTTTTCA AATTCCTGCA	1260
GTCGCTTGAC CTTTCTCGC CCCAGGAACA AGAGGCTAAG CAAATCAACT TTAACATCCA	1320
GACCGTTAAG AAGGTCTTCC TGGTTCAAAA CCACAGCAGA CAGGCTCAAA ATTTCTGTCG	1380
TTTCTGTAGA ATCGCTATCA CCAAAGCCA AAGTCCGTCC ATCTAAGCCT GTCATCATTT	1440
GAATATAGGT CGCCATCTTT TCCAGCAACT CTTGGTAACT ATCTTGCAAG TCTGGAAGCA	1500
AGAGACACAA ATCCAGCAAG GCTTTATAAA CCTCTACATG ATAGAGAATC GACTGTTCAA	1560
ACTGGCTTCC ATCTCCTAAA ATCTGTGTCT CAATTGTCTG TTTCAACTCC TCTGAAGCAA	1620
AATGGTAAGC TTCTTCTAGA TCCATCTTAT CTGAAAAGAA ATGATAGATA GCAAGCATCG	1680
GAATTGTTTG TAAATCCCC CAGTTACTAA GGGTGACTT GCGCGGATAG TAGCTTTTCA	1740
TAAAGTCAAT CTGCTTTTCT AGACTGACCA AAATTTTCTC TAGTTCTTTC TCCTCTAGCA	1800
AGTCAAATTT CAAGAGGAGC AAGAGTAGTT TCAACCAAGT AAAGGAACGA ATACCCGTAT	1860
CCAAGGTTCT AGTCATCAAG GATTGAGGAG AAAATTCTCT CACCTGCTCA ATCCAATCAA	1920
ATAGAAAGAA CTTGCACTTT TGAATATAGT CCTTATCTCC TTCTACCAGA TACCCTATCA	1980
TAAACTGCAA GAGATATTCT TGTCGATTGA GCATATAAGA CCATTCTGGA TCATCTTCAA	2040
ATACTTGATC CCATACCATC GGCTGGATT1 GATGGATTTT TGAACAAGGC TCCATATCCC	2100
AAGGACTATC AAACATAAAA CGATTGTCCA TCAAGCGTTC AAGGGAAC1C TTGACTTTCT	2160
CATAGTCTTT TGAACAGTGC GACAAGATAT AATCACGACA TTGATTTCCA TCGACTCTTT	2220
CAAAAAATTG TCTTCTTTCT TCTTTCATTA TCTATTACCA GAAAAAGAAC TACTTAAAAA	2280
GCAGTTCTTT TGTCCTTTCCC ATTACACTTT CCTTTTCTAC ATGGATGACC ACACCTTTTG	2340
CAATCTGCAA GGAGACCAAG TCATCTTGGA TAGAAATGAT TTTTCCATGA ATTCCAGACA	2400

1137

ATAACAACAC TTCATCACCA AATGTTAAAG AAGCTAAATA CTCTTGTCGT TGCTCCATCT	2460
GTTTGCGAAG CAACTTTTGC TCACGAATAG AATGAAAGCT TGACAGTAAA AGGGGACTCA	2520
CTGCCAAGAC AATCACTATT CCATAAACA ATGTTGTATC CATTAAGCTA TAATCTTAAG	2580
CCAGCTTCCG ATAATTCCGA TGATAACTGT TAAAAAACG AGTTTATATG TTGTCCATTT	2640
CTTTTCTTTG ATCAAGTAGT AACTATAAAG TGTAAATAGG GCTGGTAGAA GAGCTGGAGC	2700
AACCTTATCA AGCATTCCTT GAATACTTAC GATACTTTGT TTAGCGTCTG CTTAACTTC	2760
CCCTGCAGCA AAGGTAATCG GCACCATAAT CTTAACAGAT GTCGCTGCCA AACCAGCAAT	2820
TACGLTACAC CGATAATATT GGCAATACGA GAAATCGTGT CCATCTGTTC GCTTAGTTTA	2880
TCAATCACAG TTGTTCCTAG TTTGTATCCA TACAGACCAG TTGACAATTT AATCGCTGTT	2940
AAAATCGTAT TCATCGCAAG GAAGAACAAG ATTGGACCGA CAACCAAGCC TTCTTGAGCA	3000
AACGAAGCTG CGATGGTTGA GAACAATGGA GCTAAACAGA ATTGAGAAAG AGAATCCCCA	3060
ATACCTGCCA ATGGTCCCAT CAAGGCCATC TTGATGCTAC GTGTTTCTTT TGCCGGACGG	3120
CCATTTTCCA ACATTACAAG ATGCAAGCTG GTAATAAAG GCAGGAAGTG TGGGTTGGTA	3180
TTATAGAATT CACAGTTTTC TTCCAAGGCT TGGTAGAAAC CTTCCTGATC CTCTCCATAG	3240
TGTTTTTTCA AAGCAGGATA CATCACATTG GCATATCCCA ACCCTTGATA GTTACTATAG	3300
TTAAATCCAT TTGACAAAA GAATGCCCGC AAAGACGTTT TAAGATAATC ACGTTTGTGT	3360
AATTTGTTAG ATCCAGTCAT CGTGTGCTTC CTCCTCTACC ACATGATCCG CTGTTTITGG	3420
CTTGTTATAA AATTCAATCA AAGCAAAGAT AGTACCTACA ATTGCAATAC CAATTGTTGG	3480
GATGTTTAGA TAAGCTGCAC AAACATATCC CAACAAGACA AAGGGAATCA ACTCTTCTTT	3540
AGCCATCACT GACAAGATCA TCGCAAAACC GATAGCTGGG AGCATTTTAC CAGCAACTGT	3600
CAAACCTGTA AGTAATACCG GTGGAATGTA GTCTACGAGT TTCAACAAGG TATCCATIGA	3660
AAGGGCACCA AGCAACCCAA GGTAAATCCA ATAAAGGCAA ACAACCAAAT TGTGTCATTT	3720
AGAGTGAAT TAAATTTCTT CAAATTATGG TTTTCAAGT GCT	3763

(2) INFORMATION FOR SEQ ID NO: 187:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5053 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

		1138	
CAATCTCTGA	GTATGTGCGG	TCAATACTAw	CAAAGGGAAT yCCTGACGTC AAGTAATGTT 60
CAATGGmCT	ATAGGTAATG	GCAACCACTC	CATCAACTTT ATTATGACGC AACATCTCCA 120
GATAGTCTTG	CTCTCTATTT	GTACCATTGA	TAGAACATAA GAGTAATTG TTATTTCTCT 180
TATAGACTTC	ATTTTCCACA	TGCATAGCAA	ATTCTGAAAA GAAGGGATGC CAGATACTTG 240
GTACAATGAT	TGCAATCGTT	TCTGTTCGAT	TTTTTTTCAT TCCTCTAGCG TAGTAATCTG 300
GAATGTAATT	CAAAGTTTAA	ATCGCTTGTT	CCACTTTTTT CAAAGTTACT TCTTTAATGC 360
CTTTTCTTT	ATTAATTACA	CGTGAAACAG	TTCCAACACT AACTCCTGCT TCTAAAGCAA 420
CATCTTTCAT	GGTAATTGAT	TTTCTTTGTT	CTACCATATT ATCACCTCCT TTCAATATAT 480
AGTATCATGC	AAATGCTTTT	TAAGCAACTA	TTTCTCAATC ATTTTGGCC AGATCATTTA 540
TCCCATCATG	AATAAAATCA	CTCCAATTAG	CTTTTGAAAA TACTTCAATT TTCATGTGTA 600
AACATCTACA	TAAACAGGA	AAAGCCTTGG	TTTCATGGCT TTTTTCGTAT CTTCTATAAA 660
AAAAGCAAGA	GTTTtagatG	GCTATAAATC	TAGATGTACA TTTTGCTTAA ATGATTGAAG 720
GTCTTTTCTT	AACAAAAACA	CCCCCAAAT	TAGACTTTTT CTGTCTAACT TTTGAGGTAC 780
AGTTCAAACG	CGAAATAGCG	TTTTTTTGTT	ATTTTGGTT ACTCATCTAA TCGAATAAAC 840
ATCATGGCAT	TTAACAAGTA	TATGAGTGAG	ACCGTGTTTA TATTATTGTA ATAGATGAGT 900
CTCTTATTTT	CAATAGGAGG	AATAATAAAA	TTAGAAATAA TGATATCATA AGGTGAATCT 960
TCTAAAGATT	CCTTTGATAA	TTCTAATTCA	GTCCAAACTT CCAGTTCAAA ATTATTGCTA 1020
CAATAATAAG	AAAGTGTCTC	TGCAACGAAT	TTTGCATGAT ACTGATCAAA ATTACTCATA 1080
ACTAAAACCT	TTAGTTTAGG	CTGATTTTGT	AGCAAATTAA TCACCAAATG TTTGGTATGA 1140
GTGATGAAGG	TATAAGATAG	ATGATTTACC	ATCATTGAAC TAGAACAAAC CTCAGAGTC 1200
TCTAAATAGT	GAGAAAGCTC	TTTTTTTATA	TCTGAAACAA ATTTTGGAAT AATATTTTGA 1260
AAGTTCCTGA	TTGTATTCCC	TTTTTGATCA	AATAAAATAA ACTCAGTAAA CAACTCTTGA 1320
CGATACAGAT	GTGCGGTATT	ATGCAGATGC	CAAATCAGAT TATCCTTATT CTCCATTTCA 1380
ATCTGATACT	TGACTGAAAT	CTGATCAATA	AAATCACTCA ATAGATGGTA AGATTTTTCa 1440
ACATAACTAT	CCTTTTTCAT	GCATTTTATA	AAGAGACTTT CATCTATGAA AAACATTTT 1500
TGAAAGTAAG	ACACAAATAA	TTGGCAAACA	ACTTCTTCAT CTAAGAGAT ATTGTATTCT 1560
GATTCAAAAC	TCTGAGCAAC	ACCTTCTATT	CCTTCTGCCT GCATTAAAA ATCCAAACTT 1620
TGCTCGTTAA	AAGAATCTTT	ATCTACTTCC	ATAAAAATGAC CAACTTTTAT TCTATATAGG 1680
TTCTGTAAC	GGAGCAACTT	TAGCATTTCTA	TGCGTTGACA AATTCATTGG AAAGCTTGTT 1740
TCCTTATAAA	CCAATTCTAA	CAATTGAGAT	AGTGGCTCTG ATGAAAAATT TTCAAATGGC 1800

1139

CATTCTAGGA AATAATATTT TTCTGAAAAA TATTGTGCAA AAAAGTAACG AATGTCTCTC	1860
TCATTTCCAA TGATTTGAAC AGGGGTCAGA CTAACCTCAA ATTGAAATTG CCTTTTAATC	1920
ACTTTATTGA TTTGGCTAAT AATACGATAG AGCGAAGATG AACTGATATA AAATTCTTTA	1980
CAAATACTCT CAGCTTGACA ACCTTCATTA AAGAAGATGA ATTCTAAAAAT CGAAAAATGA	2040
GTTGAATGTT TAAAGAAATG ATGGTAAACC ATTTCAATAT CACTATCATC GGTATTAATA	2100
ATGCGTATAC CATTAGTAGA AGAATGAAAA ATCAAGTCAG GAAAAGCAGA TTTAACATGG	2160
GATAGATCAT CTTTGACTGC ACGTTCGTGA CAATTTAATA ACTCTGCTAG TTCAGAACGA	2220
TGAAACCAAC GTTTATGTTT AAATAATAAT TCTAATAATT CTAATTGCCT ATGACTTTTT	2280
TTAGATAATA AATCTCTCAT GAATATCTTT CTCTCTTTAT AAATTATCGG ATTAAACCTC	2340
TTGCAATTAT ACCACAAAGA ATAGGTATAG CATGATATAA CGACTTTTCC TAAAATCTTT	2400
TATTTCGTAT AATAACACTA CGGAGACAAT ATATAACAA TTTTCTTATT TTACCGTCTA	2460
TTGAGGGCGT GAATACAGAA TCAAATTCAA GTCTAAAGAT TATATTTTAA ATTTTAAAAA	2520
TTATATAATA GCAACAATTA AAGAATTTGA TTTTAAATAA TTATATAATA ATAACAATCG	2580
AAATAATTGA CTTTTCTATA TTAAAGTTAT ATAATAGTAA TAATCAAAGA AATTGATTTT	2640
TTGATATTAA AATAAAAAAG GAGGGTAGGC AGTGTGTGA TCAATTATTG CTGGAGGTCT	2700
TATTGGTCTC TTGGCAGGTA AAATCACTAA AAAAGTAGTT CTATGGGAAT CATCGCAAAAT	2760
GTATTCGCTG GTTTAGTCGG GGCATATGCA GGACAATCTC TTTTAGGTAG TTGGGGTCCA	2820
GCAATCGCTG GAATGGCTTT GCTCCCATCT ATTGTAGGTG CAGCGATTGT GATTACTGTA	2880
GTGTCATTCT TTACAGGTAG AAAGTAAACT TTTGCCAGT AAAGTTAGCA AACTATTTTT	2940
AAATCAATGA CGGAAAAAAT AGTTTAAATG TTAAATCGAA AGGATTGTAT ATGTCAAAAG	3000
CAAAGAAAAAT ATGTTTCATT ATTTTCTGTA TTTTAATCTT GACAATTTTC CTTCTGTGTT	3060
TGATAGATTA TCATCAAGTT AGTGATCTAG GTATTCATCT ACTTAGCTGG AGACAGAACT	3120
CCGTAGTTGA ATTCTATCTT GCTAGATATG TCTTTTGGG GACAGTGGTT CTATCAACTT	3180
TAGTTTTATT ATCCATTTTA GTTGATGATG TTTATCCTAA ACGTTACTTG GAAATCCAAC	3240
TTGAACTAA AAACGATACA TTAAAATTAA AGAATTCGGC AATCGAAGGT TTTGTTAGAA	3300
GTTTGGTGAG TGATCATAGA TTGATCAAGA ACCCAACTGT TCATGTAAAT TTACGAAAAA	3360
ATAAATGTTT CGTTCATGTA GAAGGTAAAA TTCTTCCTTC AGACAACATC GCTGACAGAT	3420
GCCAAATAAT TCAAAATGAA ATAACATAAT GATTGAAGCA GTTTTTGGT ATTGAGCGTC	3480
AAGTAAACT TGAAGTTGCA GTAAAAAATT ACCAACCAAA ACCTCAAAAC AAAAAGACTG	3540

1140

TTAGTCGTGT GAAGTAAGGA AGTAAAAAAT GGAATGGCTT AAACAATATC GATATCCAAT	3600
TATCGCTGGT CTCATAGGCG TATTCTGGC TTGTTTGATT GTCTCCTTG GCTTCTTCAA	3660
AACAATATTT GTATTGATTT TAGGAGCACT GGGAGTTGCA GCTGGATTAT ATATCGAAAA	3720
AAACTATATA GATAAATAAA AAAATAAAAA TTACTAATTT AATTAAAGGA GTTTCATATG	3780
TCAAACGAAA AAAACACAAA CACTAACGTA GAAAAGAAAG ATGCTACTGT TGTAGCTCAC	3840
GAAATCAAAG GGGAACTTAC TTACGAAGAT AAAGTTATCC AAAAAATCAT TGGTCTTTCA	3900
CTAGAAAACG TTTCAGGTCT TTTGGGAATC GATGGTGGTT TCTTCTCAA TCTTAAAGAA	3960
AAAATCGTTA ACAGCGATGA CGTAACAAGT GGTGTTAACG TAGAAGTTGG TAAACACAA	4020
GTTGCAGTTG ACTTAAACGT TATTGTTGAG TACCAAAAAA ATGTTCCAGC TTTATATTCA	4080
GAAATCAGAG AATCGTATC TTCAGAAGTT GCTAAAATGA CTGACTTGGA AATTGTTGAA	4140
ATCAACGTAA ACGTTGTCGA CATCAAACCT AAAGAACAGC ATGAAGCAGA CTCAGTAAGC	4200
CTTCAAGATC GCGTATCTGA CGTTGCTGAA TCAACAGGAG AATTCACCTC AGAACAATTC	4260
GAAAAAGCTA AATCTGCTCT TGGATCTGGT TTCTCAACTG TTCAAGAAAA AGTTAGCGAA	4320
GGTGTAGAAG CTGTTAAAGG TGCAGCAAAT GGTGTAGTAT CTCACGAAAA CACTCGTGTA	4380
AACTAAGATA AAATAAATAT AACAGGAGAA ATTATCATGT CAGTAGAAGA AAAATTAAAT	4440
CAAGCTAAAG GTTCTATTAA AGAAGGTGTT GGGAAAGCCA TCGGTGATGA AAAAATGGAA	4500
AAAGAAGGTG CAGCTGAAAA AGTTGTTTCT AAAGTAAAG AAGTTGCCGA AGACGCTAAA	4560
GACGCTGTAG AAGGTCTGT AGAAGGTGTT AAAACATGT TGAGTGCGA CGATAAATAA	4620
GGTTAAAAGT TACTTTATCT TTTTAGTAAT ATTAGTCAA AGAGTCTGAG TCAAGATGAT	4680
TCTCAGAAAA CAAAAAGCTA GAGATTCCCA ATTGCGGAAC TCTAGCTTTT TAATTTTGCC	4740
TCTTTCTCTT ATTATATTTC AGCAGGTTGT TGGCCATGAG TACGAATCCC ATGTCAATTC	4800
TCAC TTGACG CTACCTCTC AGATGACATC TCTTATAACC CAAACAAACC TTTATCTGCC	4860
CAAAGACAGA TTTTATATCA ATCTTACCTT TAGCGAAAAT TTGTCTACCC TTGGAAGATA	4920
AAAGTGCCTG ATATTCTTTA GTTTTAAAC ACTGGTAACG TTCATTCATA TACAGTCTCT	4980
TTTGAGGGGC TGATTCAGGT TCATAATCGC AGTCAACATT GATTTCAAGG CTGTTTGCTT	5040
TCTATCTCCC CGG	5053

(2) INFORMATION FOR SEQ ID NO: 188:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6492 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

1141

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

AATTCCTCTTT TTTCCAACAA AATGTATGAC CTGCACTTGA ATACTTCTCA TTGTTTGTAC	60
ATTCATCTAC TTTTATATAA TCTTTTACAA AATCATAATA TGACATAACA CACTATCCCT	120
TTTAGACAAAT ATTCCAATTA GCCTTATTAA TTCAAAATA TTGTATTAGT AATTATAACA	180
GATGTATAAT AGAAAAGCAA TGATAGATAT TATCAATTAA GCGAATTTAT ATCTAAAAGG	240
GATATTAAAG AAAGGAGATA TGCTTATGAA GATTTACAAA AAACATTATTG CTTATGTCCA	300
AGATAAGAAA TATCTTGGGG TTTTGGCCAT AATTTTTTCT GCTATATCTG CTGCACTTAC	360
AGTATATGGA TATTATTTAA TCTACAAATT TCTAGATAAG TTAATAATTA ATTCAAACCT	420
ATCCGGTGCA GAGAGTATAG CATTAAAATC TGTATTACA CTAACAAGTG GAGCGATATT	480
TTATTTTGTC TCAGGAATGT TTTCACATAT CTTGGGATTC AGGCTTGAAA CAAATTTAAG	540
AAAAAGGGaA TCGATGGTCT GGAAAAGCA AGTTTTAGGT TCTTTGACTT AAATCCATCT	600
GGTCAAATAA GAAAGATTAT AGATGCAAT GCTGCACAAA CTCATCAGGT GGTAGCACAC	660
ATGATTCCTCG ATAGTTCTCA GGCAATAATC ACACCCGTAC TTGTACTTGC ACTTGGCTTT	720
ATAGTAAGTA TAAGAGTTGG CATAATTTTG CTTGCTCTTA CTATAATTGC TGGCTTAATT	780
TTAGGGGCAA TGATGGGCGA GCAAGAATTT ATGAAGATAT ACCAAGAATC CCTATCTAAA	840
CTAAGTGCTG AAACGTGTA GTACGTGAGA GGAATGCAAG TTGTAAAAAT ATTTAAAGCA	900
AATGTAGAGT CTTTAAAG CTTTATAAG GCGATAAAG ATTACTCAA GTATGCTTAT	960
GATTATTCCC TATCTTGTA AAGGCCTTAT GTTTTGTATC AATGGTTATT TTTTGGACTG	1020
ATTGCAATTT TAATTATTCC TATAGTTTAT TTTATGACTA GCTTAGCTAG CGCAAAGGTG	1080
ATTTTACTTG AGCTTATCAT GATTTTATTT TTATCAGGAG TTCTCTTTGT TTCATTCTG	1140
AGAATGATGT GtACTCCATG TATATTTCTC AAGGAAATTA TGCAGTAGAT ACTTTAGAGG	1200
CGCTTTACGA AGATATGCAA AAAGACAAAT TAGTGCATGG TAATGTCAAT AATTTTAAAA	1260
ACTATAATAT AGAATTTGAG AATGTTAGCT TTGCTTATAA TGATAAAGCT GTCATTGAAA	1320
ATTTATCCCT TAATTTAGAA GAAGGAAAGT CCTACGCACT TGTGGTTCA TCTGGATCAG	1380
GCAAATCAAC AGTAGCAAAA CTTATATCAG GTTTTTACAA TGTTAATAAA GGAAGCATAA	1440
AGATAGGCGG GATAGCAATA AGTGAATATT CTGACGAAGC CTTAATTAAA GCCATTTCCT	1500
TTGTTTTTCA AGATTCAAAA TTATTCAAGA AGAGCATTTA TGATAATGTA GCGTTAGCTA	1560
ATAAAGATGC GACGAAAGAT GACGTTATGA GAGCCTTAAA ATTAGCAGGA TCGGATTTAA	1620

1142						
TATTAGACAA	ATTCCCAGAA	AGAGAAAATA	CAATCATAGG	CTCAAAAGGT	GTTTATTTAT	1680
CCGGTGGAGA	AAAACAAAGA	ATTGCAATTG	CTAGAGCAAT	TTTAAAGGAT	TCCAAAATTA	1740
TTATTATGGA	TGAAGCATCA	GCATCTATTG	ACCCAGATAA	CGAGTTTGAA	TTGCAAAAAG	1800
CTTTTAAAAA	TCTTATGAAG	GATAAAACAG	TTATCATGAT	TGCACACAGG	CTATCTACAA	1860
TTAAAGACCT	TGATGAAATT	ATTGTCATGG	ATAGTGGAAA	AATTATAGAA	AGAGGGTCTG	1920
ACAAAGAATT	AATGTCAAAA	GATACAAGGT	ATAAGAGCCT	GCAAGAGATG	TTTAACAGTG	1980
CGAATGAATG	GAGGGTTTCA	AATGAAAGAG	TTTTATAAAA	AAAGATTTGC	TCTTACAGAT	2040
GGAGGAGCAA	GAAATTTAAG	TAAAGCAACA	CTGGCTTCAT	TTTTCGTTTA	TTGTATAAAC	2100
ATGCTTCCTG	CCATATTACT	TATGATTTTT	GCTCAGGAAG	TTTTGGAAAA	TATGGGCAAA	2160
AGCAATGGCT	TTTATATAGT	ATTCTCAGTT	TTGATTTTGA	TAGCAATGTA	TATTTTGCTT	2220
TCTATCGAAT	ACGATAAATT	ATATAACACA	ACCTATCAAG	AAAGTGCAGA	TTTAAGAATA	2280
AGGACAGCGG	AGAATTTATC	AAAATTACCT	CTATCTTACT	TTTCTAAACA	TGACATTTCC	2340
GACATTTTCA	AAACAATCAT	GGCTGATATT	GAAGGCATAG	AGCATGCAAT	GAGCCACTCA	2400
ATACCAAAGG	TGGGCGGCAT	GGTACTGTTT	TTCCCATTAA	TATCTGTAAT	GATGCTAGCG	2460
GGCAATGTCA	AGATGGGTTT	AGCTGTAATT	ATTCCATCTA	TTTTAAGCTT	TATATTTATA	2520
CCTTTATCTA	AAAAATATCA	GGTTAATGGA	CAGAATAGAT	ATTATGATGT	CTTAAGAAAA	2580
AACTCAGAAA	GCTTTCAAGA	AAATATCGAA	ATGCAAATGG	AGATTAACC	ATATAATTTA	2640
TCGAAGGATA	TTAAAGATGA	CTTATATAAA	AAAATGGAAG	ATAGTGAGAA	AGTACACTTA	2700
AAGGCGGAAG	TAACACAAT	TTTAACCTTG	TCTATATCTT	CAATATTTAG	CTTTATATCT	2760
CTTGCTGTTG	TGATATTTGT	CGCGTAAAT	CTAATTATTA	ATAAAGAGAT	AAATTCCTCT	2820
TACCTTATAG	GATATTTACT	AGCTGCTATG	AAGATAACAG	ACTCTTTAGA	TGCATCTAAA	2880
GAGGGCTTGA	TGGAAATATT	TTATTTATCG	CCCAAAATAG	AAAGATTAAA	AGAAATTCAA	2940
AATCAAGATT	TACAAGAAGG	CGATGACTAT	AGCTTAAAAA	AATTTGATAT	TGATCTAAAA	3000
GATGTTGAGT	TTGCCTACAA	TAAAGACGCA	AAAGTTTAA	ATGGTGTAAG	TTTTAAAGCT	3060
AAGCAGGAG	AGGTCACTGC	TTTGGTAGGT	GCAAGTGGCT	GCGGTAAAC	AACTATCTTG	3120
AAACTTATAT	CAAGACTTTA	TGATTATGAC	AAGGGACAAA	TCTTAATCGA	TGGCAAAGAT	3180
ATAAGGAAA	TATCAACAGA	ATCCCTTTTT	GATAAGGTGT	CTATTGTTTT	CCAAGATGTG	3240
GTTCTCTTTA	ATCAAAGCGT	TATGGAAAAT	ATTAGAATCG	GTAAGCAAGA	TGCAAGTGAC	3300
GAAGAGGTTA	AAAGAGCAGC	AAAACCTTGCA	AATTGCACAG	ATTTTATAGA	AAAAATGGAT	3360
AAAGGTTTCG	ATACAGTTAT	TGGTGAAAAC	GGAGCTGAGC	TATCAGGAGG	AGAAAGACAA	3420

1143

AGATTATCAA TAGCCAGAGC CTTCCTAAAA GATGCGCCGA TATTGATCTT AGATGAGATA	3480
ACAGCAAGCC TTGATGTTAA CAACGAGAAA AAGATTCAAG AGTCTTTAAA TAATTTAGTT	3540
AAAGATAAAA CTGTTGTAAT CATTTACAT AGAATGAAAT CCATAGAAAA TGCAGACAAG	3600
ATAGTAGTTC TTCAAAACGG AAGAGTAGAA AGCGAAGGTA AGCATGAAGA GCTTTTACAA	3660
AAATCAAAAA TTTACAAAAA TTTAATAGAA AAGACAAAAA TGGCAGAAGA ATTTATTTAT	3720
TAGGAGGACT ACAATGGATA ATAAAAAATTT AAAAGTAAAA GATTTAGTAA GCATCGGTGT	3780
TTTGGCGATA ATTTATTTTG CCTTCATGTT TGGAGTTGGT ATGATGGGCT TGATTCCAAT	3840
ATTGTTCTTA ATATACCCGA CAGTATTAGC CATAGTTGCA GGAAGTGTG TTTATGTTATT	3900
TATGGCTAAG GTTCAAAAGC CATGGGCACT ATTTATATTT GGTATGATAT CACCACTTGT	3960
GATGTTTGCA GCTGGTCATA CCTACGTAGT TGTGGTTTTA TCACTTATAG TAATGATAAT	4020
AGCAGAATTA ATTAGAAAGA TTGGTAATTA TAATTCATTT AAATACAATA TGCTTTCTTA	4080
TGCAATCTTC AGCACATgGA TATGTAGCTC TTTAATGCAA ATGCTTTTAG CAAAAGAAAA	4140
ATATATGGAG TGGTCTTTGA TGACTATGGG AAAAGATTAT GTTGATGTAT TAGAAAAGTT	4200
AAATAACTTAT CCTCACATGG CTTTAGTAGC CTTAGGTGCT TTCTTAGGAG GAATTCCTGG	4260
AGCATATATA GGCAAGGCTC TATTGAAAAA ACACCTTTCA AATGGATTAT ATTGTGTGGG	4320
ATACTTTACT CCTTGCCTAA TTTTATGGTG CTATCTGAAT TAAACCTAT AGTTAAGATG	4380
TTTTTGAGTA TACCTATTGT TATTAGAATG TTTATTTTAC CATTTATGGC AGCAAGCTTT	4440
ATGATAAAGA CCTCGGATGT AGGCGCAATA ATTTATCGA TGGATAAGCT TAAGATTTC	4500
AAGAATGTAT CCATACCTAT TGCGGTTATG TTTAGATTCT TCCCATCTTT TAAGGAGGAG	4560
AAGAAAAACA TCAAAATGGC TATGAGAGTA AGAGGGATAA ATTTTAAAAA CCCAGTCAA	4620
TATCTTGAAT ATGTTTCTGT GCCACTACTC ATTATATCAT CTAATATATC AGATGACATT	4680
GCAAAAGCGG CAGAAACAAA GGCAATAGAA AATCCAATTG CCAAGACCAG ATACATTCGC	4740
GTAAAGATAC AGCTAATTGA TTTTGTTTAT GTTTTAGCGG TTGCTGGACT TATTGTGGGA	4800
GGCTTAATAT GGTGAAATA AAAAATTTAA GTCTTGATTA TGGTGAAGAG CATATATTAG	4860
ATGATATATC ACTATCCATA GCCGAGGGAG AGTGCGTGCT ATTTACAGGA AAAAGTGGAA	4920
ATGGTAAGTC ATCTTTAATA AATTCAATCA ATGGACTAGC TGTAAAGGTAT GATAACGCAA	4980
AGACAAAGGG CGAAATAATT ATTGATGGTA AGAATATAAA AAATTTGGAA CTTTATCAAA	5040
TCTCAATGCT TGTTTCAACT GTTTTTCAAA ATCCTAAGAC ATATTTTTTT AATGTCAATA	5100
CGACATTAGA ATTTATTTT TATTTGGAAA ATATCGGTCT TGCAAGAGAA GAGATGGACA	5160

1144

GGCGTTTGAA GGATATACTT GAGATATTCC CGATAAAAAA TCTTTTGAAC AGAAATATAT	5220
TTAATCTATC CGCGCGTGAA AAACAAATTC TTTGCATTGC AGCTTCTTAT ATAGCAGGTA	5280
CAAAGATTAT AGTTATGGAT GAGCCTTCAT CGAATTTAGA TATTAAAAGC ATAAGTGTTT	5340
TGGCAAAGAT GCTAAAGATA TTTAAAGAGA AAGGCATAAG CATAATTGTT GCAGAGCATA	5400
GAATTTATTA TTTGATGGAC ATAGTTGACC GTGTATTTT AATAGATAAA GGAAAGCTTA	5460
AAAAAECTTA TACTAGAAGT GAATTTTAA AGCTAGATAA AAATGAATTA AATGCTTTAA	5520
GTTTAAGAGA TAAAGAATTA AGTAAATTAA AAGTTCCTTA TTTAAAAGAA GGTGGAGAGT	5580
ATCAGATAAA AAATCTTAGT TACAAATTTA CTGATGATGA GTGTTTAAGC TTTAAAGATA	5640
TTTCGTTCAA GCTTGGGAAA ATTTATGGCA TAATAGGATC CAACGGACGA GGAAAATCAA	5700
CGCTTTTAAG ATGTTTAATA GGTCTTGAGA AAAAATCAAA AGAAGAAATT TATTTTAAGG	5760
GAGAGAAGCT ATCTAAAAA GAAAGACTCA AAAACTCTTC ACTTGTTATG CAAGATGTAA	5820
ATCATCAATT ATTCACAGAT GAAGTATTCA ACGAGCTTAG ATTAGGAGTA AAGAATTTTG	5880
ATGAAGAAAA GGCGAAAATC ATTTTAAACC CCAATTATTC ACCCCAAATC TAAAAACCAT	5940
CCAGAATCCT TGCCTTAGCT TAGATCCTGG ATGGTTTCTT TTTTCACCCA ATGGGTGTTT	6000
TTTACTAGAC AAAAAAGAGT TTCCCCTTTA TGGTATAAGT GTAGAAAAAA ACACAAAAAG	6060
AAAGGAAACT CACATGAACA GTTTACCAA TCATCACTTC CAAAACAAGT CTTTTTACCA	6120
ACTATCTTTC GATGGAGGTC ATTTAACCCA GTATGGTGGT CTTATCTTTT TTCAGGAACT	6180
TTTTTCCCAG TTGAAACTAA AAGAGCGGAT TTCTAAGTAT TTAGTAACGA ATGACCAACG	6240
CCGCTACTGT CGTTATTCCG ATTCAGATAT CCTGTCCAG TTCCTCTTTC AACTGTAAAC	6300
AGGTTATGGA ACGGACTATG CTTGTAAAGA ATTGTCAGCT GATGCCTACT TTCCAAAATT	6360
GTTGGAAGGA GGGCAGCTTG TTCACAGCCA ACCTTATCCC GTTTTCTTTC CAGAACTGAC	6420
GAGGAAACAG TCCATAGTTT GCGATGCCTC AACCTTGAAT TGGTCGAATT CTTTTTACAT	6480
GTTCACCAGC TG	6492

(2) INFORMATION FOR SEQ ID NO: 189:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7174 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

AACTGAAGGT AAAGGCTTCG ACGCAGAACG TGACGCTGCC CAAGCTGCCC TTGATGACCT	60
---	----

1145

TAAGAAAGCT CAAGAAGACA ACAACTTGA	CGACATGAAA ACAAACCTTG AAGCATTGAA	120
CGAAAAAGCT CAAGGACTTG CTGTTAACT	CTACGAACAA GCCGCAGCAG CGCAACAAGC	180
TCAAGAAGGA GCAGAAGGCG CACAAGCAAC	AGGGAACGCA GCGGATGACG TCGTAGACGG	240
AGAGTTTACG GAAAAGTAAG ATGAGTGTAT	TGGATGAAGA GTATCTAAAA AATACACGAA	300
AAGTTTATAA TGATTTTGT AATCAAGCTG	ATAACTATAG AACATCAAAA GATTTTATTG	360
ATAATATTCC AATAGAATAT TTAGCTAGAT	ATAGAGAATT ATATTAGCTG AACATGATAG	420
TTGTATCAAA AATGATGAAG CGGTAAGGAA	TTTTGTTACC TCAGTATTGT TGTCTGCATT	480
TGTATCGGCG ATGGTACCAG CTATGATATC	ATTAGAAATA CAAACATATA AATTTGTAAT	540
ACCGTTCATA ATTGGTATGA TTTGGACAGT	AGTTGTATTT CTTATGATCA ATTGGAATTA	600
TATAGGCAAA TACTAAGAAG AGACAAAAAT	ATATAAATAT TTCTGTACTT ATAGGATATT	660
TAAAATCAAA ATAAAGTTAA TTTACTTATT	TGCAGAGGTT GCAACCCAGC CTCTGTTTTT	720
CGATAAAAG GGACGGAATC TCATTGTGTT	GGGTTTTGTC TCATCAATAG AAAGGAACAA	780
AGAGTGTTG TAACGAACA CGGGTTTCAG	AATTTCTTAC TAAATATAAA AGAAAGGAAT	840
TGAACCCGAC CTAAATGGTG GTTCGATTCA	GAACATCAAT AGAAAGGAAT AAGGGTGTTT	900
GTAACGAAAC ACGGCTATG GACTGTGCCA	AAAAGATAGT TTTTCTTAGG ACGTAAGCGT	960
CCGTCGTCAA AACTCCTAGA TGGCTGTGTC	CGTTTGACGC CCTTTGTATC TTGAATTATG	1020
AACAATACTG AATTTTATGA TCGTCTGGGG	GTATCCAAAA ACGCTTCGGC ACACGAAATC	1080
AAAAAGGCTT ATCGTAAGCT TTCCAAAAAA	TATCACCAG ATATCAACAA GGAGCCTGGT	1140
GCTGAGGACA AGTACAAGGA AGTTCAAGAA	GCCTATGAGA CTTTGAGTGA CGACCAAAAA	1200
CGTGCTGCCT ATGACCACTA TGGTGCTGCA	GGCGCCAATG GTGGTTTTGG TGGAGCTGGT	1260
GGTTTCGGCG GTTTCAATGG GGCAGGTGGC	TTCGGTGGTT TTGAGGATAT TTCTCAAGT	1320
TTCTTCGGCG GAGGCGGTTC TTCGCGCAAT	CCAAACGCTC CTCGCCAAGG AGATGATCTC	1380
CAGTATCGTG TCAATTTGAC CTTTGAAGAA	GCTATCTTCG GAACTGAGAA GGAAGTTAAG	1440
TATCATCGTG AAGCTGGCTG TCGTACATGT	AATGGATCTG GTGCTAAGCC AGGGACAAGT	1500
CCAGTCACTT GTGGACGCTG TCATGGCGCT	GGTGTCTATTA ACGTCGATAC GCAGACTCCT	1560
CTTGGTATGA TGGCTCGCCA AGTAACCTGT	GATGTCTGTC ACGGTCGAGG AAAAGAAATC	1620
AAATATCCAT GTACAACCTG TCATGGAACA	GGTCATGAGA AACAAGCTCA TAGCGTACAT	1680
GTGAAAATCC CTGCTGGTGT GGAAACAGGT	CAACAAATTC GCCTCGCTGG TCAAGGTGAA	1740
GCAGGCTTTA ACGGTGGACC TTATGGTGAC	TTGTATGTAG TAGTTTCTGT GGAAGCTAGC	1800

1146

GACAAGTTTG AACGTGAAG AACGACTATC TTCTACAATC TCAACCTCAA CTTTGTCCAA	1860
GCGGCTCTTG GTGATACAGT AGATATTCCTA ACTGTTTCACG GTGATGTTGA ATTGGTTATT	1920
CCAGAGGGAA CTCAGACTGG TAAGAAGTTC CGCCTACGTA GTAAGGGGGC ACCGAGCCTT	1980
CGTGGCGGTG CAGTTGGTGA CCAATACGTT ACTGTTAATG TCGTAACACC GACAGGCTTG	2040
AACGACCGCC AAAAAGTAGC CTTGAAAGAA TTCGCGGCTG CTGGTGACTT GAAAGTAAAT	2100
CCAAAGAAAA AAGGCTTCTT TGACCATATT AAAGATGCCT TTGATGGAGA ATAATACTCT	2160
TCGAAAATCT CTTCAAACCA CGTCAGCGTT GCCTTGCCGT ATATATGTGA CTGACTTCGT	2220
CAGTCGTATC TACAACCTCA AAACAGTGTT TTGAGCAGCC CGTGGCTAGT TTCCTAGTTT	2280
GCTTTTTACT TTATAGATTT TTTAAGACTT TCCTAAGTAA TGACGGACCG TAGTGACCTC	2340
CTTCGAAGTT CCATACCTAA ACTTTGAACC TAAGTTTAA AGTTTCCGGA CAGCTGAAAC	2400
CAAGCTGTTT CAGGTGTTTT CATTACGGCA GAAAGTCTT CATTAGTTG TGAAATGGTG	2460
AATGATACTC TTCAAAAAT TCTTCAAACC ACGTCAGCGT CGGCTTGTC TGGGTATGGT	2520
TACTGACTTC GTCAGTTCTA TCCACAACCT CAAAACAGTG TTTGAGCTGA CTTCGTCAGT	2580
TCTATCCACA ACCTTAAAAC GGTGTTTTGA GCAGTCTGTG CCTAGCTTTC TAGTTTGCTT	2640
TTTGATTTTT ATTGAGTATG AATTACCTAA ATTATGATGC ATAGTTGATG GGATATATAT	2700
AATAGATTGA AATAGAATAT GAACAAATTG ATAAGAGGAT TTTAAAGTAA TCTCTAACAA	2760
TGCTTTAGAA ACTATGGTGT GCTATTCCTA ATTCAATTCA CTATAACTTG TTTACGTTTT	2820
AAAAAAGAGC CGTCGGGCTC TTTTACTTA TCTTCAGTTC CCTGCATTTC TTTTATCACA	2880
GCTAGCTAG TCTGATATC CTTTCCAAG ACCTTAAACT TGTAAGTCAA GTCTTCTTGG	2940
TATTCCTTGA TAAGTTCTTT TTGCTGGTTA ATGATTTGCA GGCTGTTTGG GATAATATCC	3000
ACATCGTCCT TGATAGCTTG AACGCGGTCA GTGGTATTCA AGACTTCATC TGTGATGGTT	3060
TGGCGATTTT TTGTAACCAG ATAACCTCCG GCTGCAGCTC CTGCAAAAG CAGTAGGTTG	3120
GATAATTTCA TAGCAACTCC TTAAGCGTTT TTGATGGTTT CAGCGACTTG AGCAAGTTTG	3180
TCAAAGTCTG GTTCGTGGGC GATAAAATCA ATCTTGAGGT CATCGTCAGC ACTGTAGCGA	3240
GGCACAAGGT GAACGTGAGT ATGAAAAACT GTTTGACCAG CGACTTCTTC ACAGTTGGAA	3300
ATGATATTCA TACCAGCAGC CTTAGTGAAT TTCATGACTT TTTGAGCTAC TTTTGGTACT	3360
TGGGCAAGA GTTGGCTGGC GCTCGTAGCA TCCATCTCCA AAAGATTGCG ATAGTGTTC	3420
TTTGGCACGA CCAAGGTGTG TCCTAGTGTT ACTTGAGAGA TATCAAGAAA GGCAAGGACC	3480
TGCTCATCTT CATATACTTT TGAAGCAGGA ATTTCCCCTG CGATGATTTT AAAAAAATG	3540
CAATCTGACA TAAATCTAC CTCTACTGTA CTGAATTTTG ATATAATATA GCTACATTAT	3600

1147

ACCAGATTTG GAGAAAATAT GTTAGAAATT AAAAACCTGA CAGGTGGCTA TGTTCATGTT	3660
CCTGTTTTGA AAGATGTGTC CTTTACTGTT GAAACTGGGC AGTTGGTCGG TTTGATTGGT	3720
CTCAATGGTG CTGGGAAATC AACGACGATC AATGAGATTA TCGGTCTGTT GGCACCTTAT	3780
AGTGGCTCCA TCAATATCAA TGGCCTGACT CTGCAAGGAG ATGCGACTAG CTACCGCAAG	3840
CAGATTGGCT ACATTCCCTGA GACGCCTAGT CTGTATGAGG AATTGACCCT CAGAGAGCAT	3900
ATCGAAACGG TTGCTATGGC TTACGGTATT GAGCAAAAAG TGGCTTTCGA ACGAGTAGAG	3960
CCCTTGTTAA AAATGTTCCG TTTGGAACAG AAATTAGACT GGTTCCTCTG TCATTTTCA	4020
AAAGGGATGA AGCAGAAGGT CATGATTATC TGTGCTTTTG TGGTGGATCC AAGTCTTTTC	4080
ATCGTGGATG AGCCTTTCCT TGGTCTTGAT CCGCTGGCTA TTTCTGATTT GATTCAGCTT	4140
TTGGAAGTGG AGAAGCAAAA GGGCAAGTCT ATTCTCATGA GTACCCACGT GCTGGATTCTG	4200
GCGGAGAAGA TGTGTGATGC CTTTGTCAAT CTTTACAAGG GAGAGGTGCG TTCCAAAGGC	4260
AATCTCCTGC AACTACGTGA AGCCTTTGAT ATGCTGAGG CTAGTTTGAA TGATATTAC	4320
TTGGCTCTGA CCAAAGAGGA GGATCTATGA AAGACTTGTT TTAAAGAGA AAGCAGGCCT	4380
TTCTTAAGGA GTGTCTGGT TATCTGCGCT ATGTGCTCAA TGACCACTTT GTCTTGTTCC	4440
TGCTTGTCCT GTTGGGCTTT CTAGCCTACC AGTACAGTCA ACTCTTACAA CATTTTCCTG	4500
AAAATCATTG GCCTATCCTT TTGTTTGTAG GAATTACGTC TGTTTTACTT TTTACTTTGGG	4560
GAGGAACTGC CACCTATATG GAGGCTCCAG ACAAGCTCTT TCTCTTAGTT GGAGAAGAGG	4620
AAATTAAGCT CCATCTCAAG CGTCAAACTG GCATTTCCTT AGTCTTTTGG CTCTTTGTAC	4680
AGACCCTTTT CTGTCTGTTA TTTGCGCCTT TATTTTATAG AATGGGTAT GGCTTGCCAG	4740
TTTTTCTGCT CTATGTGCTT TTATTGGGG TAGGAAAATA TTTCCACTTT TGTCAAAAGG	4800
CCAGCAAATT TTTACTGAA ACTGGACTGG ACTGGGACTA TGTTATTTCCT CAAGAAAGCA	4860
AGCGTAAGCA AGTCTTGCTT CGTTTCTTTG CCCTCTTTAC GCAGGTCAAG GGAATTTCAA	4920
ACAGCGTTAA GCGTCGTGCC TATCTGGACT TTATTTTAAA GGCTGTTCAG AAGGTGCCTG	4980
GGAAGATTG GCAAAATCTC TATCTGCGTT CTTATCTGCG AAATGGCGAC CTCTTTGCTC	5040
TCAGTCTTCG TCTTCTCTTG CTTTCCTTGC TGGCGCAGGT TTTTATCGAG CAAGCTTGGA	5100
TTGCGACAGC AGTGGTAGTT CTCTTTAACT ACCTCTTGCT CTTCCAGTTG CTGGCCCTCT	5160
ATCATGCCCT TGACTACCAG TATTTGACCC AACTCTTTCC GCTGACAAG GGGCAAAAGG	5220
AAAAGGCTT ACAGGAGGTA GTTCGAGGAT TGACCAAGTT TGTTTTACTT GTGAATTAG	5280
TTGTGGGTT GATTACCTTC CAAGAAAAC TAGCCCTTCT AGCCTTACTA GGAGCTGGTT	5340

1148

TGGTTTTACT AGTCTTGAT TTGCCTTATC AGGTAAAACG TCAGATGCAG GACTAACATT	5400
GCTGATACGA CACTAAAAA GAAGTTGAGT TCAGTCTGTC TCAACTTCTT TTTTGTTACT	5460
ACAGGATAAT GGTGGTCCG TAGAGACTTA TACTCTTCGA AAATCTCTTC AAACCACGTC	5520
AGCGTCGTCT TACCGTACTC AAGTACAGCT TGCGGCTAGC TTCCTAGTTT GCTCTTTGAT	5580
TTTCATTGAG TATTAACTTG GTCTTGACTT GGTCAAAGTG GAAGCGGTCA TAGGCCCGCC	5640
AAGCGGCGCG AGTTGGAGCA TCTGGATCAA GAGCGCTGAG TCCCATGAGA AGACTGGAAG	5700
TCTGGTAAAA TTTTCTAGT TCAATCAAGA ATCGATTATC CACTGTTTCA GCCTTGCTA	5760
GAAAACCAAG AATAGAGTTT AATTGCTCCT GAAAGCGGAC GTCGTCAGCG CTGCTGTGTT	5820
TGCATGCTTG GTAGGCTTTG TTAAAGTCAG TAATCAAAGT ATGAGCTCTT TTGATGGGGT	5880
CTGTATCTGT CATGGGAATG CCTCCTTTAA TCTGGGTGCC AGTCTTACTT CTGGCAACTG	5940
TGTTTTGATA CTGTTAGTTT ATCACTTTTA ATTCTTTTIT TTTATTCAAA TCTTTAATTG	6000
TCATTGAAAT GTCTTGAATT GCGCTGAGTG AATTTTATGA TAAATAGTT GTAAGCTCAT	6060
CATGATGTTG TAGAAAAATA TCCTTTTAGG AGTTTTCAA GACTGTTTAG GATTGGGTGT	6120
GCTTGGGCTA GACCTTTTCT GTTATTCTTT TCTTAGGAGG AGAATCCAAT GAAATATATG	6180
ATTATTGAGA CGCAGAAAAC AGTCTATAAA GTAAACATCG ACGATATCTA CTATATCCAA	6240
ACACATCCAA CTAAAGCCCA TACCGTACAG ATTGTTACAG AAGAAGCTAG TTTTAATATG	6300
CTTCAAAATT TAAGTAATCT TGAGAACCAA TGTGGGAAA CCTTGATGAG ATGTCATCGA	6360
AATTGTTTGG TTAATCTTGA TAAATTAAAA TCGATTGATT TTCAAGAAAG AATCCTTTTT	6420
CTCGGAGAAG AAGGTCAATA CGCTGTCAAG TATGCCAGAC GTCGCTATAG AGAAATTCGT	6480
CAAAAATGGT TGAAAGAGGG AGAGTAAGAA GATGAGAATA TTTGTTTTAG AGGATGATTT	6540
TTCCCAACAG ACTAGAATTG AAACGACGAT TGAGAAACTT TTGAAAGCAC ATCATATCAT	6600
TCCTAGCTCT TTTGAGGTAT TTGGCAAGCC GGACCAACTG CTGGCTGAAG TGCATGAGAA	6660
GGGGGGCCAT CAGCTATTCT TTTTGGATAT TGAGATTCTGA AATGAAGAGA TGAAGGGACT	6720
GGAAGTGGCT AGAAAGATTG GGGATCGGGA TCCTTATGCC CTGATTGTCT TTGTGACGAC	6780
TCACTCGGAG TTTATGCCCC TGTCTTTTCG CTACCAAGTG TCTGCTTTGG ACTACATTGA	6840
TAAGGCCTTG TCAGCAGAGG AGTTTGAATC TCGGATCGAG ACAGCCCTCC TCTATGCCAA	6900
TAGTCAAGAT AGTAAAAGTC TGGCGGAAGA TTGCTTTTAC TTTAAATCAA AATTTGCCCA	6960
ATTTTCAGTAT CCTTTTAAAG AGGTTTACTA TCTCGAAAACG TCGCCAGAG CCCATCGTGT	7020
TATTCTCTAT ACCAAGACAG ACAGGCTGGA ATTTACAGCG AGTTTAGAGG AGGTTTTCAA	7080
GCAGGAGCCC CGTCTCTTGC AGTGCCACCG CTCTTTTCTC ATCAATCCTG CAAATGTGGT	7140

1149

GCATTGGAT AAGAAAGAAA AACTGCTTTT CTTT

7174

(2) INFORMATION FOR SEQ ID NO: 190:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3207 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

CCACCAGGGA AAATCATTGA AGTTGGTAGT CACCAAGAGT TAATGCAGGC GCAAAGTTTC	60
TACCATCATC TATTCAATAA ATAAGGAGAA TGTGATGAAT CCTAATCTTT TTAGAAGCGT	120
CGAGTTTAT CAGAGACGTT ACCATAACTA TGCACAGTG TTAATTATAC CTCTTTCATT	180
ACTATTTACT TTCATCTTGA TTTTCTCCCT TGTGTCACA AAAGAAATTA CTGTTACTTC	240
CCAAGGAGAA ATCGCCCTTA CAgTGTGATT GCCTCCATTC AGTCAACCAG TGATAATCCT	300
ATCCTAGCTA ATCATTTAGT GGCAATCAA GTAGTTGAAA AAGGGGACTT ACTCATCAA	360
TACTCTGAAA CAATGGAAGA AAGTCAGAAA ACTGCCTTAG CAACTCAATT ACAAAGACTT	420
GAGAAGCAAA AAGAAGGACT TGAATTTTG AACAAAGCT TAGAAAAAGC GACTGATCTT	480
TTTTCTGGCG AGGATGAATT TGGCTACCAT AATACCTTTA TGAATTTTAC TAAACAATCC	540
CATGATATTG AACTGGGTAT CACAAAGACT AACACCGAAG TTTCAAATCA AGCTAATCTT	600
TCCAATAGCA GTTCATCAGC TATTGAACAA GAAATTACAA AAGTTCAACA ACAAATGGA	660
GAATATCAAG AGTTGAGAGA TGCTATCATA AATAACAGAG CACGCTTACC AACTGGCAAT	720
CCGCACCACT CAATTTTGAA TCGTTATCTT GTAGCCTCAC AAGGACAAAC ACAAGGAAC	780
GCAGAGGAGC CATTTTATC TCAAATTAAT CAAAGTATG CAGGTCTTGA ATCATCTATC	840
GCAAGCCTCA AAATTCAGCA AGCTGGTATC GGAAGTGTAG CAACTTATGA TAACAGTTTA	900
GCAACCAAAA TTGAAGTACT CCGCACTCAG TTTTACAGA CAGCCTCACA GCAACAAC	960
ACTGTGGAGA ATCAATTAACT AGAATTAAAA GTACAACACTAG ATCAAGCCAC ACAGCGTTTG	1020
GAAAAAATA CCTTAACCTC CCAAGTAAA GGTATCGTTC ATCTGAACAG CGAATTGAA	1080
GGTAAAAATA GAATTCCAAC TGGTACAGAA ATTGCTCAA TATTCCTGT CATCACAGAT	1140
ACAAGAGAAG TACTAATCAC TTACTACGTA TCTTCTGACT ATCTACCTCT ACTAGATAAA	1200
GGACAACTG TAAGATTAAT ACTGGAGAAG ATTGGAAATC ACGGCACCAC CATCATCGGC	1260
CAACTTCAGA CAATTGATCA AACTCCTACC AGAACAGAGC AAGGAAATCT CTTTAAATTA	1320

1150

ACCGCTCTTG CAAAACTATC TAACGAGGAT AGTAAACTCA TCCAATATGG CTTACAAGGT	1380
CGCGTCACTA GTGTAAC TAC AAAGAAAACA TATTTTGATT ATTTCAAAGA TAAAATTTTA	1440
ACACATTCTG ATTAATTTTC AGATAACACT CTATAACTAT TTATTATCTT ATCAAAAAGG	1500
AGAATCATAA CATGGATAAG AAACAAAACC TAAC TTCATT TCAAGAACTA ACAACTACCG	1560
AACTCAATCA AATTACAGGT GGAGGATTGT GGAAGATT ATTATATAAC ATTAATAGAT	1620
ATGCTCATTA CATCACATAA GAACTTCATC ATCCAATACA ACTATAAAAA AATAAGACCG	1680
AGAAACAAGT ACTCTCGGTC TTATTTTTC TCATTCTGTA TGTATCACAG TAAGTACCTG	1740
ACGAAAGACT TGATTTTGAC AGGTGGTATT TAGACTGGTA TTAGGATGGC TTCCACAAT	1800
CTTCATGACG GTATAGAGAC CAACTCCTCT CTCCTCCCCT TTAGAAGTGG CTCCAAAGGA	1860
GAAGATTTCA GAAATATCGA TGCCCTCTTC TTTGATGGAG TTTTCGATGA TAAAGGTCTC	1920
CTGTGCTCCA TTTTAAAA AGGCGATTGA AACATGAGGT TGACTAGCTT CCACACTGGC	1980
TTCAATAGCA TTGTCACAAA GGATAGACAC AATCGTTAGA AAATCAAGTA GACTCATCCC	2040
CTCGACCTGA ATCTCCTCAG GAACTTCGAC ATTAAAGACA ATGTTCTTAT CTCTGGCTTT	2100
TAAAAATTTT CCTGCTAGAA GACTTTTGAG GGCTTTATCA CGAATATTTA CCAATCTGCC	2160
CAGGTATAT TTATGTTCT GCAATTTCTG ACTGGAATCC TTTAAGACGG AGCCATAGAC	2220
CTCTTTTATC TGCTCCATAT CCTCCTCTTC AATGCCCAGA CGTAAGCTAG TCAAGAGGTT	2280
GGTATAATCA TGACGAAAGC TCCGTACTTC CTTGTAAAGC TCCTCTATAT GCCGACTATA	2340
GCGTTCCATA TCTCTATAGC GCAGGGCCTG CTCTGTGTTCC AATCTCTCAT AGAGTTTTTC	2400
CTTCAAAATG GTATCCAATT TCTTGATAAC CCCCATAAAA AAGAGTAGGT AAAAGACTAG	2460
GATGAGATGG CGAACAGTCT TTGATTGAAT ACTTTGTTCA TATTCAAAAA AAGACAGACT	2520
TTCCATGACT AGATAGTAGC CACCCATTAT CCAGTTAATC TGAGTCAGGG ACTTTTGAAA	2580
GGCTTTTATCG AGAATCTCCT TTCTCAAGCT AGTAAATCG TAGTCCAACC ATTTCAAAAA	2640
AGCTAGAGAA ATGAAGAAAT TGAAAAATAT TATACATAAC CCAGTAAATG AGTAGCCATC	2700
ATATACTTGC CCTTGTCCTA AAAATGGAAG CACAAAATAG GAGACTCCTC TATAAAGAG	2760
ATTACCAAT ATCATTGGAA AGAGACCATA AAAGAAAAGG AGTTTTTTAG GAAGCCCTCT	2820
CAATAATAAG AAAGATAAGC CTATGCCGTA CAAGGGTTCC ATAAAATAAG ATAGGTAAAC	2880
ATTTCTTACT ATATAGCTAA TCATCACAAA AACAAAGGCC AACAGTATCT TCAAAAGAAA	2940
GGCCTTAAAA ATCCTCTCGA AAGTAAGATC AATTCATCC ACCTTAAAGA AGATGACAAT	3000
TTCTAGTCCA TTAGTAACAA GTGTATACAA CAATATCCAA GCAATGTTCA TAAATTTCTC	3060
TAGCTCAGTG TAATTTATTG ATGGCCTCAG AACTTCCCT GACCTTATAA CGGGCGATTA	3120

1151

GACAACTTCC ACCATTGGGA GAGAAGAGCA GTTTTCTCTT CTTATCCAAA TGCACCACAT 3180
TTGCAGGATT GATGAGAAAA GAGCGGT 3207

(2) INFORMATION FOR SEQ ID NO: 191:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 10357 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

CTGAATCAAG TGTACTGCAC CAGTTCGTGC ATCAGGCATA ACAACATCTA CAGATATAAT 60
ATTGTTTCT GAGTCCGCCT CATAAGTTAA AATCATAAAT TTTTCGATAT TCGAATTTTT 120
AGTAGCTTGT TCAATTCTCT GAATCATTTT ATCAGAAACT AACTCCATCT GAATTGGAAA 180
GGAATGACTA TTTTCATCAT TTTTGTAGGA AGAATGTTGA TTAAGATAAA GTGTATTCAT 240
CTGAGCATAT TCAAATAAGT AGCCACTCTT ATTTTCTTGT ACCAAAGGAA ATTGTTTGT 300
AAGTCGCTTC TTACCCTTTA TAATTAACAA TACTTTCCCA TATTTTCTG TATTTGTTTC 360
AAATTCTAAA TATCCCAAG TCTGTCTGC TAATTGTAAT TTATACTCA ACAAATCTGC 420
TGATGCAAAAT GCAGTATCAA TATGATTAGG TCGCGTCCAT GCATAACCAT TCGACACTAT 480
CATTGTCTCT CTTTTTCTA GACGTTTCAT TACATAATCT TTTTGCCCTT TCATCAAAGT 540
ATCTACAATT TTTTGTGCCT CAAGCGAATC AAAGAGATCC TGATTCAACA TAATTCCTCC 600
TCCTCCAAAT ACTTTTAAAT GAATTATACC ATTTCTTAA AGAAATTACT ACAATAATTA 660
TCTTTTCTT AAAGTCTGT GTCAGAGTAA TTTAGAAAAT TATATCTTCT ATAGTAAAT 720
CAATTAAAAA CTGAACAAAT TTATTGGGAA ATTCAAATCG CTTTCTGAAA ATATTTTAGG 780
AACCCTAGTG TAATATTCCA GATTCAATTC ACTATAAAAC TGACCTTTCT CCTGCAAAAG 840
AAAAAGGAAA GACTTCCTTT CGTGCCTTTC CTCTTACTTG CTACTTGTTT GATTATTTT 900
GGTAAGCTAC TGCTTGTCTG ATAAATCCT GAATCGGCTC TCCTTGGTGG AGAGCTTTTA 960
CTATTTTCGA ACCGACGATA ACACCATCTG ACACCGCATT GAAGCGTTCC AGATCGGCTT 1020
GACTAGATAC ACCAAAACCT GTCAAGACTG GGATGTCGGC CACTTGATGA AGTTGCGCCA 1080
AGTGCTTGTC CAAATCTGCA CGGTAATTGC CTGATTCCC TGTCACTCCA TTGATGGCAA 1140
CGGCATAGAT GAATCCCTCC GCCCTTCAA TCAACTCTT CTGGCGCTCA ATTCTGTGG 1200
TCAAGCTTAC TAAAGGAATC AAGGCGATAT CTGTATTGTC CAAAAATGGT TCTACAAAGT 1260

1152

TGGCATGTTT	ATGAGGCAGG	TCTGGGATAA	TCAAGCCCTT	CACAGCTGTA	TCAGCCAGAT	1320
CTTTGACAAA	GTTCTCCACA	CCGTACTGAA	AGAGGGGGTT	GAAGTAGGTC	ATGATGACCA	1380
GTGGAATCTC	TGTTTCAATG	GTTTTC AAGG	TTTCAACTAA	AGCCTGGGTA	GAGGTCCCCT	1440
GGGCTAAACT	GCGCAAGCCA	GCTTCTTCGA	TAACAGGTCC	ATCTGCAACA	GGGTCTGAAA	1500
AGGGAATACC	CACTTCAATT	GCAGAGACAC	CCAAATCTTC	TAAAAAGTGA	ATTGTTTCAG	1560
CAAGACCGTC	CAAACCTTTC	TCGTGGTCAC	CAGCCATGAT	ATAGGGAACA	AAAATTCCTT	1620
TTCCAGCTGC	TTTAATAGCA	TTTAATTTTT	CTGTTAGTGT	CTTAGGCATG	AGCTTCTCCC	1680
TTCTTTGCTG	CATCTGCTTC	CAAGCGGTCC	TTGACTTGAA	CCACATCCTT	GTCCCCACGA	1740
CCTGATAGGC	AGACAATCAT	AGACTTTTCT	GGTCCAAGTT	CTTTGGCCAA	TTTCACCGCA	1800
AAGGCGATAG	CATGGCTAGA	TTCCAAGGCT	GGGATAATCC	CTTCCACACG	AGACAAGAGT	1860
TGGAATCCTT	CCAAGGCTTC	TTCTGCTGTC	ACAGGGACAT	AGCTGGCACG	TTTAATATCG	1920
TGGTAGTGAG	AATGCTCTGG	ACCGATACCA	GGATAGTCCA	AACCTGCTGA	GATAGAGAAG	1980
GCTTCAAGAA	TTTGACCATG	GGCATCTTGG	AGCACATCCA	TGAGGGAACC	GTGAAGGACA	2040
CCTGGACGAC	CCTGGTCAA	GGTAGCTGCG	TGGTGCTCTG	TATCCACACC	AAGCCCTGCT	2100
GCTTCAGTTC	CATACATAGC	TACTGACTCA	TCTTCTACAA	AGGGATGGAA	GAGCCCGATA	2160
GCATTCGACC	CACCACCAAC	ACAGGCTACT	AGGGCATCTG	GCAGATCTCG	ACCTGTCAAG	2220
TCACGGTACT	GTGTTTTAGC	CTCTCGACCG	ATGACACTTT	GGAAGTCACG	AACGATTTCT	2280
GGAAATGGAT	GAGGCCCCAA	GGCAGAACCA	AGGATATAGT	GGGTATCGTC	GATATTAGCC	2340
ACCCATGAAC	GAAGGGCTGC	ATTGACCGCA	TCCTTGAGCA	CGCGCGAACC	ATCTGTTACA	2400
GCCTCGACCT	TGGCTCCCAA	AAGCTCCATG	CGGAAGACAT	TGAGGGCTTG	GCGTTTGACA	2460
TCTTCCTCAC	CCATGTAGAT	GGTACATTCC	ATGTTAAAGA	GGGCTGCAGC	AGTTGCAGTT	2520
GCCACACCGT	GCTGACCAGC	ACCCGTTTCT	GCGATAATTT	TCTTTTTTACC	CATGCGTTTG	2580
GCAAGCCAAA	CTTGTCCTAA	GGCATTTGTT	ATCTTGTTGG	CTCCTGTATG	GTTAAGGTCT	2640
TCCCGTTTGA	GATAAATCTT	GGCTCCGCCA	ATATGCTGGG	TCAAGTTTTT	TGCGTAATAA	2700
AGAGGAGTTT	CACGTCCTAC	GTA CTGGCGC	AAAAGCTGGT	TTAATTCCTC	TTGGAAACTT	2760
GGGTCTGCCT	GACTTTCACG	G TAGGCCTTC	TCCA ACTCCA	AAACTGCTGT	CATCAATGTT	2820
TCTGGGACAA	AACGTCCGCC	GAATTTTCCG	TAAAATCCAT	CTTTATTGTT	TTCTTGATAT	2880
GCCATGCTTT	ACCCTCTCTA	TAAATCTTCT	AATCTTTTCA	TGATCTTTTT	GTCCATCTGT	2940
CTCCACTCCG	CTCGATACAT	CTACTGCATA	GGGAGTAAAG	TGTTGAATTG	CTTTTACTAC	3000
ATTATCTTCA	TTAAGGCCAC	CTGCGATAAA	GAAGGGCTGT	GCTAGTCCAG	TCGTATCCAG	3060

1153

TTGACCCCAA	TCAAAGGGCT	GGCCACTTCC	TGCCACAGGG	GCATCAAAGA	G TAGATAATC	3120
TGCCTGAGAA	TTGGGGACAT	GCCCATTTC	ATCTACCTGC	ACAGCCTGAA	TACTGGCACA	3180
AGGCAAAATC	TCAAATAAAT	CATCTGCCAC	CTGACCGTGA	ACTTGAACCA	AGTCCAAGCC	3240
AACTTTGTCA	ATCGCTTCCA	GCAGTTCTAC	CCGACTTGGT	GAAACAAATA	CTCCAACCTT	3300
TTTCACATCT	GCAGCAATAA	GCTTTGCCAA	CTCAGCTGCC	TCTTCTAAAG	TCACCTGTCT	3360
TTTACTAGGT	GCAAAGACAA	AACCGATATA	GTCGGCTCCT	GCTGAAACGG	CTGTTTCCAC	3420
CGCTTCTTG	GTCGATAGTC	CACAAATTTT	AACCTTTGTC	AATCTGCAAC	TCCTTGATTC	3480
TCGGGGCCAC	ATTTTCTGCC	TGCATAAGAG	CTGTCCCTAC	CAAAATTCCG	TTAAAGTATG	3540
GGGCTAGTCG	TTCCGCATCC	TGCCCTGTGA	AAATGGCAGA	TTCAGAAAATG	TAATAGCGAC	3600
CTTCCTCAAA	GTAAGGGGCT	AAATCTACAC	TGGTCTGCAA	GTCGACCTCA	AAGGTAGTCA	3660
AGTTGCGGTT	GTTGACCCCG	ATAATCTCAG	CACCAAGTCT	GTGGGCTACC	TCTAGTTCAG	3720
CTAGATTGTG	AGTCTCCACT	AAGACTTCCA	GACCAAGCTC	TGTCGCGTAG	TCATACAGTT	3780
CCTTGAGGCG	TTCTTCGGAC	AAGGCTGCCA	CAATGAGCAA	GATAACTGTC	GCACCTGCAT	3840
TGCGAGCGCG	GATGATTTCG	TTTTTCATCGA	TGATAAAGTC	TTTGTGAGC	GTCGGAATCT	3900
CTACCTGACT	GGAAATTTCC	CGTAGATAAT	CCAAATGCCC	TTTAAAGAAA	ACCTCATCTG	3960
TCAACACCGA	AATCATCACT	GCTCCGTTTT	CTTCATAAGT	CTGGGCCTGT	TGCACAATAA	4020
CCACATCGAG	ATTGATATCT	CCCAAACCTAG	GGCTAGCTTT	CTTGACCTCA	GCGATTACCT	4080
GCAAGCGGTC	CTGATGATTC	TTCAAAAATT	CTGCCAAGCG	ATAGGTCTGG	CGCAGAGGCT	4140
GGATTTGCTC	CAGCTTCATC	TGCTCCACCT	CACGCGCCTT	CTGCTCTAAG	ATTCTGTGCTA	4200
AAAATTCCTG	ACTCATTTTT	GGTACTCCTG	TAACAGTCTG	AGTTTTTCAA	GGGCCTTGCC	4260
TCTAGCAATC	ACTTGACGGG	CCAAGGCAAC	CCCTTCCTTG	ATGCTATCAA	TCTTACCATT	4320
AGCATAGAAA	CCAAGACCAG	CATTCAAGAC	TGTCGTTTCC	AAGAATGGAC	TTGCTTCGTT	4380
TTTCAGAACG	CTAAGCAAAA	TTTCTGCATT	TTCTTGAGCA	TTCCCAACCAC	GAATATCTTC	4440
CATAGCATAG	CCTTCCATTC	CCAAATCCTC	TGGAGTAAAG	CTTGACAAGC	TGATTTGCGC	4500
ATTTTCAAGA	AGTGCAATCT	TGGTTGTTCC	GTTCAAGCCA	GCTTCATCCA	ACCTTCTCTG	4560
TCCAGCAACC	ACGATGGCAC	GTTTGCGACC	CATATTTTTC	AAAACCTGAG	CTGTACTTTC	4620
TAGGAGTTCT	GGACGACTAA	TTCCAAGAAG	CTGTGTTTCT	AAAGCCATTG	GATGAATCAG	4680
TGGACCAGTC	AAGTTCATAA	TCGTTGGAAT	TCCCAATTCC	AAACGAGCTG	GCATGATGTA	4740
TTTCATAGCT	GGGTGCATAT	TTT TAGCGAA	GAGAAAGACG	ATTCCAGTTT	TATCAAAGAC	4800

1154

CTTACCTAGT TCAGCTGGTT TGAGGTCAAG ATTGATTCCC AAGGCTTCGA GGACATCTGC	4860
GGAACCAGAT TTAGAAGATA TCGAGCGGTT ACCGTGTTTG GCCATGTCAA TACCGCCACC	4920
AGCCAAGACA AAGGCTGCAG TTGTGGAAT ATTAATACTG AAAGACTTGT CCCCACCTGT	4980
ACCACAGTTG TCCATGGCAT CATGAATCTC AGTTGGAATA TGCTGGGCAT GTCCTCTCAT	5040
GA CT TGGGCA ATGGCTGTGC GTTCTTCAGG TGT T T C C C C C T T C A T C T T A A G A G C T A A G A G	5100
GAGAGAAGCA ATCTGCGCTT CAGTTACACG CCCAGTTACG ATACGCTCAA TGACATCCGT	5160
CATTTCCACA CCTGATAAAT TTTCAAATTT TGCTAGTTT TCAATAATCT CTTTCATCCT	5220
AGTTTCCTCA CTTTACAACC TCCTCGATAA AATCCGAAT AGAAGACAAG CCGTCTGGCG	5280
TTCCAATGCT CTCTGGATGG TACTGGAAGC CATAAATCGG TAGGTTTTTA TGTGAATCC	5340
CCATGATGGC TTGGTCATCA GTCGAACGAG CTGTCACTTC AAAGTCTTCT GGCATTTCTT	5400
CAATCAAAAT ACTGTGATAA CGCATGACCG CACGCGCCATC CTCAATACCT TGATACAAAA	5460
CAGATGGCGC TTCAAAGTTG ATATTGCTCT CTTTCCCATG CATGACTTTT GGAGCCAAAC	5520
CTAGCTTACC ACCAAAGACT TCTGCAATGG CTTGGTGGCC CAAACAAATC CCAAGAATCG	5580
GCTTCTTGCC TGCAAAATCA CGAATCATGT CTTCCATCTT TCCAGCATCA ACTGGCCAAC	5640
CAGGACCAGG AGAAAAGACC AGACCATCTG CTTTTTCAGC TTCTTCATAC AGCTTGAAT	5700
CATCATTTCT CAGAACCTGA ACTTCTGCAA AATCCCAAT GTATTGGGCC AAGTTATAGG	5760
TAAAAGAATC ATAGTTGTCA ATCAATAAAA TCATGCTCTT AGTTCCTCAA TTCTAGTCAT	5820
AGATTTTGCT TTGTTAATGG TTTCTTGGA TTCGTTTTGG GCGATAGAGT CGTAGACAAAT	5880
CCCTGCCCCA GCCTGCACAT AGGCTCTTTG ATTTTGTGAGA ATCATGGTTC GGATGGCGAT	5940
GGCCAAATCC ATATCACCCG TCCGAGACAA GTAGCCGATT GCCCCAGCGT ATACTCCCCG	6000
TTTTTCCGTT TCCAGTTCAT AGATACGTCT CATCGCTCGA ATCTTTGGTG CTCCAGAAAC	6060
GGTTCCAGCA GGAAGCGTTG CTTTCAAGGC ATCCATGGCA GTGAGTTCTG GAAGCAAACG	6120
CCCCTTGACT ACGCTGGTCA AATGCATGAC GTAGCGGAAG AGCTCCACTT CCATATACTT	6180
AGTGACTTGG ACAC TGGT CG TTTCAGAGAT GCGGCCAATA TCGTTACGCC CCAAGTCTAC	6240
CAACATTCCA TGTCTGCTG TTTCTTCTC ATCAGAGAGG AGGTCAGTCG CCAAGGCCTT	6300
GTCTTCTTCA TCCGTAGCCC CTCTTGGTCG CGTCCCTGCA ATCGGATTGG TTGTCACGAT	6360
GCCATTTTGG ACAGAAACCA AACTTTCTGG ACTAGCTCCG ATGATTGAT AATCCCCAA	6420
ATCATAGAAA TAAAGGTAAT TAGAAGGATT AGTCACGCGG AGATTCTGT AGAAGTCAA	6480
TGGATTCCA GTAAC T T C T G C T G A A A A A C G C T G G C T G A G T A C A C A T T G G A A C A T A T C T C C	6540
GTTACGAATC AAGTCACGAG CTGTTTCTAC CATTCCTCA AACTTATGTG GAGCGATATG	6600

1155

CGGTTTGAAG TCTAACGGAG ATAGATCCAA ATCTTCAAAT TCATTGGAG CAGGAATCCG	6660
TAATTCCTCA AGCACTTGGT TCAAGGATTT TTCCAAGGCC TCTTGACTGC GCTCACTATA	6720
AAGTGCATCC TCTATGACAT GTATCTTCTC CTTCTTGTGG TCAAAGACCA TATAGCTCTC	6780
ATAGACAAAG AAATGCATGT CTGGCGTCCC AATTGTATCC TCAGGGATTT GACCAATTTT	6840
TTCATAAAGC GAAATCATAT CGTAACCCAC AAAACCAATG GCTCCACCAC CAAAAGGTAG	6900
CTCTGAGTGG TGCTGACTCT TATGAATCAC TTCATAAAGG AAATCCAAGG GATCCCGATC	6960
AATCACTTGA CCATTTTGAT AGAGAACCCC ATTTTCAAAC TTAATCTCAA AAATGGATT	7020
ATAGGCTAGG ATAGAAAAC GAGCTGTTTC CTTGTCTCTC GGAATACTCT CTAAAATAAC	7080
CTTATGTTGC CCCTTTAAGC GCATATAAGC CAAGATTGGT GATAAGACAT CTCCATGAAT	7140
GATTCGTTCC ATTGTAATTT CCCTTTCAGT TCTACTTCTA GTCGGTGGTG ACTGTATGAA	7200
AAATCCCCAC GCAAAAATAAC TTGCGTGAGG ACGAAATTCG CGGTGCCACC TCAATTATAG	7260
GATTCTCCT ATCTCTCAT CCGTCTCAG ATATCTCCTG TAACAGGCTG TCGGATAAAG	7320
GGCACTCCCT TGAGAATGAT GTTTTCTTCT CTCGTTTCAG ATGAACCCAA CTTTACAGCT	7380
TTCTCTGCTT GTTTTCAGCA ACCACAAGCT CTCTGTGAGA GAAAGAACTG TAATTTTCC	7440
ATCTATTATT TTTTAGCTTC TAGTAGCTG CAATCGCAGC TAGGTCCTTG CCTCCACGAC	7500
CAGAGACATT GATGAAGAGA TGTTCATCTC GGTACACCTT TATACTCTTC GAAAATCTCT	7560
TCAAACCGCG TCAACGTCGC CTGCGGTAG GTATGGTTAC TGACTTCGTC AGTTCTATCT	7620
GCAACCTCAA AACAGTGTTC TGAGCTGACT TCGTCAGTTC TATCCACAAC CTCAAAACAG	7680
TGTTTTGAGC TGACTTCGTC AGTTCTATCC ACAACCTCAA AACAGTGTTC TGAGCTGACT	7740
TCGTCAGTTC TATCCACAAC CTCAAAACAG TGTTTTGAGC AGCCTGCGGC TAGTTTCCTA	7800
GTTCGCTCTT TGATTTTCAT TGAGTATTAC TAGCTTTTTT CGTATTAGTC CAGCCTTTTT	7860
GTTTGCTTTT AGTAGTAGGC ATGGAGCTGT AGATAGAACT CAAGTTCATC AAAGCGACTT	7920
AAGGCCCTAA TAAAGATAA ACCAAACGAC GGATAGAAAA AAGCCACAC ACAGAATATA	7980
CTTCCGTGTG AGGGCGTTGG TAACGCGGTG CCACCTCAAT TATAAAGGGA CTATCCCTTT	8040
ACATCTCTGC CTTGTTTAAAC AACAAGCTGC ACTGTAAGGT GTGCGCACCG AATTTTCATT	8100
GTTTCAAATT CATTTTCAAA ATCAGCCAC TTTCCTACT TCCAACCACC TATTCACAAT	8160
CACCACAGGC TCCCTGAAGA TCAAAAATAG TTACTTTTCT GATTTGTTGA ACTTATTTTA	8220
ATACTTTGTT TTTTCTTGT CAAGACTTTT TTACGATTTT TTTGAAAATA TCATTCGAAT	8280
ATGACCATGT CTTCCCTAGA TCGAACATGA ACATGTCCCA CTTCTTAGAA ATTGGATCCA	8340

1156

ACTCAATAGA AACTGAATGG AGGCTAAACA GAACTTATTT TAGAACACTC CATCTTTTCC	8400
ACTAGGATTT TCAAGAATTA AACAACTA GAACTCTGT CTCCTAACAA ATTTAGGAGA	8460
AACTTCAACA GATGTGACAC TTTCCCTTT AATAATGCT AAAACACCTT CTATCATTTT	8520
TTTAGCCAAT TTAACATAAT TGGGAGCAAT TGAGACAAA GCTGGAGTAT AATACTGAGA	8580
AATAGGAATA TTATCAAATC CAATGATAGA AATATCATCT GGAATAAGAA TTCCTTTCTC	8640
ATAGCACGCA CGAATCAAGC CCTGAACCTT TTCATCTCCT GAAACAAAA TAATGTCCGG	8700
ATAATTTTGG GTAGTCAAGT GCTGCATTGC ATAAGAATAA ACTGAATCAA TTGTAGATAA	8760
GCCATAAATG ACTTTTAAAT CCATAAAGTA ATTTTATCA TTCAGAAAAG AACGCACACC	8820
TCTTTCACGA TCCTTATTAA CATGGGATTC TCCTCCCATA AGCAACCACA TATTTTAAAA	8880
TTTTTCTTCA GTTACAGCTT TCATCATATC ATAAGTAGCT TGAAAATTAT TATTAGATAC	8940
ATAGACTACT CCAGACGTTT GAGATTCACC GAAAACAAGA AAAGGCATAT GGTTCCTCTT	9000
TAAATACTGA ATTCTGATAT CATCTACACT TTCATAAAAA ACAATAACAC CATCTACTAG	9060
GCTACCTGTG CTTGATATAA TTGAATTACT AATTGTATCC TCCTCTCCAA AGTACTCAAC	9120
TATAGCATTA ACACCAAATT CTTTACACGT CCGTAACACT TTATCTAACA GCGTATGAAA	9180
CCAAATTAAA GGAAGAGT CGATTTTTT TACAGAAATC AATATATTTA TAGCTTCTTT	9240
TTTAGTTAAA TTTTTCAT ACGCATTTGG AATATACGAC AATTCCTCTA TAACTTTTGT	9300
AATCGCTTGA TAAGTTTCTT CTTTAACATT TACTCCACCA TTAATAACTC GTGAAACTGT	9360
TTTTGGAGAA AAACCTGATA AACGTGCAAT ATCATAAATA GTTACCTTTT TCCCATTAT	9420
ATTTTTCATT TCAGTCCCTC ATTACGAACA TTCTAATATT ACTATACAAT ATTTAATTTT	9480
TTTAAACAAG AGAATTTAGT AAATTATTTA AGATCCACAA ATTCACAAAA TTAATTTTAC	9540
AAATATTCTT CCCCTTCAAA AAAGTTTAAA TTGCATTTCA CACCTTTATT TTTAAGAATG	9600
TTTCCAACCT CACGACAAAT AAATTCATAT GAGAAAAAAT TGCCATAAAA TTGTAGATTA	9660
ACTTTTTCAG TAAAATGTGT AGGATTTATA AAAACATATA ATAGCCTGTC AATGTAACAT	9720
TTTAACATAG AGTTAATTTT TTCTTTAAAG ATAACATTG TTATCAACTC ATCAGGAGGT	9780
AAATGAAAGG CAAACACCAT TTCACAAATA TCATAAAAAG AAATAAATTT GTATACTTGT	9840
ATCAAACAAT TATTATCAAA ATATTCTATT TTACCTAAAT CAAAATTGAT TTTATAATCT	9900
TTCATAAAAA CCTCTGAGCA AAAATCTACT CAAAAATTAG ATGATTAAAA CATCTAAAAA	9960
GCAAAAAGGAC AAAAACATCT GTCCCTTTGT TTAATAAAT TCAGCTAATT TCTTCGACAT	10020
AAATAACACC TACAATATTA GCAATTTCTT CCATCAGTCG AAGATGTTCA AATCTACCTG	10080
ATAATCCAG AGTAATAAAT GACGCTATTT TTTTGTCCGG AACATCAAAG TATTCAATTC	10140

1157

TGTCAGAATT AACATCTCCA AACGCTGTTC TTGAATCGGT CATTCGTGATA CCATTTTCTG	10200
CACAATAAAC CAATACACGA TTATAGGCTT CTGTAGATTT AACCACTATA TACAATTCAA	10260
TCATTTTAGA ACGATTTTGC AGATATTTT TTAGTGTTG GAACATGGAT ATCACACCCC	10320
AAACAGAAAT GGCTACTAAA AGAGCTCCCT CATAAGG	10357

(2) INFORMATION FOR SEQ ID NO: 192:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6867 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

CGGGACATTC TCAATCTTCT GTCTTTTGT TTTCTCTTCT TTCTATGATA CAATGGAAAA	60
AATAAATTCA AAAGGAGTTT TTTTATGACT TATCCAAATC TCTTGGACCG CTTCTTAACC	120
TATGTTAAGG TCAACACGCG CTCTGATGAA CACTCTACTA CTACTCCAAG TACACAGAGT	180
CAGGTTGACT TCGCAACAAA TGTCCTAATT CCTGAAATGA AACGTGTTGG ACTGC AAAAT	240
GTTTACTATC TACCGAATGG TTTTGCTATT GGAACCTTGC CAGCCAACGA TCCGTCTTTA	300
ACACGTAAGA TTGGTTTAT ATCGCACATG GATACTGCTG ATTTTAATGC TGAAGGAGTC	360
AATCCACAGG TAATTGAAAA CTACGATGGT GGTGTGATTG AACTAGCGAA TTCTGGTTTC	420
AAACTCGATC CAGCTGACTT CAAGAGCTT GAAAAATATC CAGGACAAAC GCTCATCACA	480
ACAGATGGAA CAACCTTGCT AGGTGCTGAT GACAAGTCAG GAATTGCTGA AATTATGACA	540
GCCATTGAAT ATCTAACTGC TCATCCTGAA ATTAAGCACT GTGAGATTCG TGTGGTTT	600
GGTCCAGATG AAGAAATCGG TGTGGTGCC AATAAATTG ATGCAGAAGA TTTTGATGTG	660
GATTTTGCCT ACACTGTGA TGGTGGTCCA CTAGGTGAAC TTCAGTACGA GACTTTCTCA	720
GCCGCTGGTG CTGAATTGCA TTTCCAAGGT CGTAATGTCC ACCCTGGTAC TGCCAAAGGG	780
CAGATGGTCA ATGCCCTTCA GCTAGCAATT GATTTTCATA ATCAACTTCC AGAAAATGAC	840
CGACCTGAGT TAACTGAAGG TTACCAAGGT TTTTACCATC TAATGGATGT GACAGGTAGT	900
GTTGAGGAGG CGCGTGCAAG CTACATCATT CGTGATTTTG AAAAAGATGC CTTTGAAGCG	960
CGTAAAGCAT CCATGCAATC TATCGCTGAT AAGATCAATG AAGAACTTGG GAGCGACCGT	1020
GTCACCTCA ACTTGACAGA CCAGTACTAC AATATGAAAG AAGTCATTGA AAAAGATATG	1080
ACTCCAATTA CCATTGCTAA AGCCGTTATG GAAGATCTAG GTATCACGCC TATTATCGAA	1140

1158

CCAATCCGGG GTGGAACAGA CGGCTCTAAG ATTCCTTTA TGGGAATCCC AACTCCGAAT	1200
ATCTTTGCAG GTGGCGAAAA TATGCACGGA CGTTTTGAAT ACGTTAGCCT TCAGACTATG	1260
GAACGTGCAG TTGATACCAT CATTGGCAGC GTAGCTTATA AAGGCTAAAA AGACGAGGTA	1320
GCTCAGCTAC TTCGCCTTTC TTTTATTCT ACTGGTTTTT CTTGATTTC AGTAGTTGTA	1380
GAAGATTCTG TTGTTTCATT TTCTGAAGTT GATTGAGCAG GTTTAGAATC TCTTGATTG	1440
CTTGGTTTGT TTTGCTGCT AGCAGTTTCA ATGTTAGATT CTGCAGTTGC GTTGGTTGG	1500
TTCTCAGCAC TGGTGTATC ACCATTGCT TCAGCATTC TTGCTGGACT TGTTCCTCA	1560
CTTGCGCTAG CTTTGACTG GATTGATGA TTCAAAATA GAATAGCTTT TGTCGATTCA	1620
AGTAAAGCTG TTTGTCTTT ACTCTTAGCA GAAAGTTGAT CTAATAATGC ATCCACCTTA	1680
TCAAAGTCCG CATCAGATCC ATTATTACTT TCTAAATAAG AGTGAAGCGA CATGAGAATA	1740
TCGTAGAGTT TTTGATAGAG TACAAGTGTC TGAGGATCTT GCTCAGCATT TTCCTTTCT	1800
TGTTGAAGGG CGCTAGCGAT ACGAGTCAAG ACATCTTTTA CCGACTGTT TACTTCATCC	1860
AAGTCTGCAT CAGCCTTGTT TGTGGCAGCT TTTAGATTTT CTAATTCTTC TGCCAAGGAT	1920
TGTCCTGATC CTCTTCATG GATTGTGTC AAGAGTTGAT TTGCCTTGCT CAAAAGACTT	1980
TCTACTTCTT CCTGTATC TGTGCGAGAT TATTGGTTGC TATCTACCAT GTACTCCTAA	2040
AACAGGAGAG TTATAATCCA AGATTACAAG GCCTTACAGA AATAAGAAAT CCAGATAAGA	2100
CAATGTTTCT CCAAGACGCT ATTCGCTTCG CACAGCAGCA CGGATTCAAT ATGCTTTAAT	2160
TTTAAAGTTT AGGTGTCAAG ACCTCTTTT AGTGTGCCA AAATTTAGAG AAGTAATCAA	2220
TCAACTAACT TTTATTTTT TCAAACTTTC AGTAACTGA CCTAAAGCTA ACTCAATCTG	2280
TCTTTGTAGA TGCTTCTGCT ATCAGCTAGA AGTTGATCTA CTTTGGCCAA GACTGCCTTC	2340
TCATCAAAG TTCCAGGTG ATAGTTGGAT TGCAGGGATG GAATCTTGTT TTTCAAAGCC	2400
GCTTCATATC CCTTAGTTG AACCTTGATG TAGTGATTGT GGTGCGCATG AGGAATCACA	2460
AAACCTTCTG AATCTTCACT TATAATTCGA TTGGCATCAA AACCATGACC ATCTTCTTCC	2520
TCATGATGGA CATGTAGTGA CGGATTACTT AATACAGAAC TAGAAGAACT TCCTACCTCT	2580
TCCGTGTTAG AGTGTGATGG GGGATTGTTA AGAGATGACT TAGGAATATA GTGATAGTGA	2640
TCCCCATGTC TTAATATATA AGCATCACCT GTATCTCTGA CAATATCATT AGGGTTAAAG	2700
ACATATGTGG CTGCTAATTC ACCTGCCGAC AAGTCACTCT CAGGAATCAA ATGATAGTGA	2760
CCACCATGTG GTACTATAGT AGATTGAAAT AGAATATGAG CAAATTGATA AGGGGATTTT	2820
AAAGTAATTT CTAACAATGA TTTAGAACT ATGATGTGCT ATTCTAAAT CAACTCACTA	2880
TATATAACCA TCATCGGTAG TATAACGTCC CTGTAATTTT GCTACAGATA CTTCTGCACT	2940

1159

AGCTCCTTTA TCGTCTTTAC CATGTTCTTG TTTTGGCGA TTGATTTCAT CTTTGTTCG	3000
TACATTTTCT GCATGAGCTT GATCTTTAAG GTAAACATAA TACTTTCCAT CTACCTTAAT	3060
AATATATCCT CCCTTAACCT AACTGACGAT ATCTTGATCT TTCGGCTGAT AGTTGGGGGC	3120
TTTCATTAAT AGCTCTTCAC TAAAGAGCGC ATCAAAAGGA ACTTTACCAT TATAGTAGTG	3180
ATAATGATCG CCATGAGAAG TTACATAACC TTGATCTGTA ATCTTAATAA CAATTTGTTT	3240
TGCTTGAATT CCTTCTTTT GACTAACCTA GTCTGGAGTC AAATTTTCAG TCTTCTTAGT	3300
GTCTTTATTA CTGTTTACAT ATGAAACAGC ATTTTATCT GTATTGGCCT GTTAGCTATG	3360
TTGGTTCAGA GCATAAACAC ACAGACTTAA GGAAAGGATA ACAACAGATC CAGCTGCTAT	3420
ATATTTCTTT TTAAATTTCA TAATTACCTC ATTTCTATAA TTATTTATAT GATGCTTCA	3480
TTATTAAATG ATTAAATAA TTAATTAACC AATTAATTAA CTAGTAAATA TTCCACCTCT	3540
TTTTAAGTIG TATGTCAAGA AATTTTATAT ATTAATAATA AAATGAAATT CTCCCAAAGT	3600
CAGAGTTTTA TTCTAACTT TTGAGAGAAC TTCATTTTGG ATTCAGACTT TTCTACTGC	3660
TATTCCTTAC GCTATGAGAT CAGATAAATT CTTTTTATC ACTTCTCCAC TTGGCAATCT	3720
TAATTCATC GTTCCATCCA TATTGAATAT AACACTATCT AAGCCTAATC CGTAACTAGC	3780
TGTAAATTT TCTAATTTT CTGTACAGG ATCTACTGCT GGAGCTTCCT CTAATGCTGG	3840
ATCTAACATA GGGTCACTCC CCACATTCCC TTCTGGATTC AACATTCCAT TATCCGTTGA	3900
GTTTCTGGT TTACAGGTT TTTCTGTTGG TGCCTCTGGT AAAGAATCTG CTGGTTTATT	3960
TTCTGTGGT TGGTCTCAA CTGTTCCAGT AGATACTTTT CCATTTTCAG ATGGTTTATT	4020
TTCAACATTT CCTTGAGGTG CTCTCCTGT AAAATCTGCC ATATTCTTTT TAATGACTTC	4080
TCCCGATGGT AAATATAATT CAATTGTTCC GTCCATATTA AACAAAGACAT TTCTAGCTT	4140
CATCCCATAA CTTTCAGCAA ATTTTGCTAC TTTTCTTGT ACAGGATCCA CTGTAGGAAC	4200
TTCTCTAAC GTTGAATTAC TAGTACTATT CCCAGTTTCA GAAAGTTTTT CTTTTCTAC	4260
CTTCTACTA GTCTTTGGT CTCTACCTT TTCATCAAGT TTTAAGTTTT CTGTGCTTT	4320
ATTCCTTTTA AATTGTGGTA GAATACTTGG TTTATCAGT TGATTTTCTT TTCCAAGAT	4380
AGGTACTTCC ACAATATAAG TCGATTGATT GTCCAAATAA GCATTTGCCA TGAAGGTTAC	4440
AGGAATTTTA TTCCGGCCG TTCTGGTTGT TCCTGGTTT AATTTCGGAA TCGGTAATTT	4500
GATTCACCA ACTTTATAGT TATTTTCTAA ATAAGCATTT CCATGAAATT CATCAAACAC	4560
TCTGACTAAA GCATCAGTTC CTTAGGCAC TGCAAATTGA GGGTTCACCT TAAATAAGT	4620
ATCCCTGCA TGGAAAGGAT AGAAAATCGT TTGACTGCC ATTTTGTAAG CTAAAGAGGT	4680

1160

TGGAAGCTGTA AATGTACCAT CATAACTTAC TTCTGGATAA TCTTTTGAAG CGATAGTATA	4740
CTTAAATGTT TGTCTCGGTA AATAAGGTTG ATCTAATTCA AAGTTTGCAA TATTCCTTAC	4800
TCCTTCTCCA AATACTTTAC CAGATACTTT CTCCAATACT TTTCCATCTG GTGTTATTAA	4860
TTTTACTAGC ATATTGATAC CTAATTTTTT CTCCAATTCA GGCGGAAAAC TAAAAGAAAC	4920
GCGTTTTTGA CCATTGGCTA GAGTAAAGTT TTGATTATTA AACGTACTAT TTTTAAACAA	4980
ATTAACAACA TTCGTTAATT CTTCTCCAGT ATAAACTTTA TTCCCTTCTT TTTTAGCAAC	5040
TCCTTCTTCG GGTTTAAACA GTTCATAGTT ACTGTGAGAA TGACCAATTC CAACCGGTTT	5100
ATGTTTCATCA ATCGGATCTG CATGATGGTG ATCTCCATGC GGATAAATAA TCGCATTTTT	5160
TTCTTTATTC ACGACAATAC TTTCACGTTT GACACCATAT TGTTTCATAA TGCCAGCAAT	5220
TTTTTCTTCG ATTTTTTTAT CTAATCTTTT CATTTCTTTG GCATTACTTG GATAATCCTG	5280
TTTCATGAGAT GACAAAGAAT CTAATCCATT ATGACTAGTT TTAACCTCCT CTAAATGTTT	5340
TTGCGCAsCT TAATTTGCTC TTCTGTCAAG TCCTTCTTGA AGAAATAATG ATTGTGGTCT	5400
CCGTGACTCA TGACAAAACC TGATTCATCT TCAGCGATAA TACGATTAGC ATCAAATCCG	5460
TATCCATCTT CTTTCATGTT CTCATGTGAA GTTCCTGGAT TGATTGGAAG AGATGGAGAA	5520
GGTGTGCTA GACTATTGTT TGGAAAGAGTC GGTGCCCCAA TTTGATTGA TTTTGGGAATG	5580
TAATGGAAAT GATCACCATG TCTTACAATA TAAGCTGTAG CCGTTTCTTC AACGATATCT	5640
TTTGATTAA AAATATAACC ATCAGATGCT GAAGAGAGCT CCTTACTTGT CGTTAAAGAA	5700
GAAGGATTGC TTGAAAGACT GCCTAGACTA GACACTACTT CATTAGGTTT TGCATTTGTA	5760
GAAACTGTAG AACCAGTTCC ACTGATAGGC ACCATTCTGG CAATCTTTTC TTCTAAGGCA	5820
GAAAGCTTGC TGTAAGGAAT AAAGTGGTAA TGGTCGCCAT GCGGAATCGC AACTCCATTT	5880
GGTGACGAC TGATAATCTT AGCAGGGTCA AAGACCAGGC CATCTGATTC ACTGTAACGT	5940
TGGGCGCTAG GTGAATCATA GAGTTCCCTTC AAAAGACTCT GGAGATTTTC AGATTTATTT	6000
GCTGGCTTGC TAGTTGATCC TTTTGCTACA GATTGCGTGT TATTGTCACT AGCTGTTGAA	6060
GAATAGCTTA ACTGACTCGG TTGCATATTT TTTCCAGCCA GATGTGCTTT AGCTGCTGCT	6120
AATTCAC TAGCAGATAAATC GCTTTTGGGA ATGTAGTGAT AGTGACCTCC ATGAGGAACG	6180
ATATAAGCAT TACCCGTATC TTCGATAATA TCAGCTGGAT TAAAGACATA ACCATCATTT	6240
GTCGTATATC GTCCCTGAGA CCTTGCTACA GCAACATTAG AGTTAACCTT CTCATTATCT	6300
TTGACATGTT CTTGTTTTTG ACGATTGATT TCATCTTTAG TTCGAACATT ATCAGCATGA	6360
GCTGCATCTT TCAGGTAGAC ATAATATTTT CCATCGACCT TGATGATATA ACCACCCTTG	6420
ACTTCATTGA CAATATCAGC GTCTTTAAGT TGATAGTTTG GATCCTTCAT CAAGAGTTCT	6480

1161

TCACTAAAGA GGGCATCATA AGGAACTTTC CCATTATAGT AATGATAGTG GTCACCGTGT	6540
GACGTACAT AGCCCTGATC TGTAATTTTG ATTACAATTT GCTCAGCCTG AATTCCTTCT	6600
TTCTGGCTAA CCTGGTCTGG TGTCAAGTTT TCACTTTTCT GACTTGACTG GCTGCCATCC	6660
ACATAAGAGA CACGATTATT GTCCTTATTT TCCTGCGAAC GATGCTGGTT TAGTGCATAG	6720
GCACATAGAC TCAAGGATAC GATAACAGCT GATCCAGCTG CTATATATTT TTTACTAAAT	6780
TTCATAAATC CCTCATTTCA ATAAATGATG AAGTTTTTTC TCAACTTCTT TTACTTTATT	6840
AAATAGTTTT CTAAACCCGG GGGTACC	6867

(2) INFORMATION FOR SEQ ID NO: 193:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 999 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

CGTTCTAAAA ATGCAGTACG TTTGATTGAG AAATCAGTTA AAGGTATGCT TCCACACAAT	60
ACACTTGGAC GCGCTCAAGG TATGAAGTTG AAAGTATTTG TTGGAGCTGA GCACACTCAC	120
GCTGCACAAC AACCAGAAGT TCTTGACATT TCAGGACTTA TCTAAGGAAA GGAACAATAA	180
AGTATGTAC AAGCACAATA TGCAGGTACT GGACGTCGTA AAAACGCTGT TGCACGCGTT	240
CGCCTTGTTT CAGGAAGTGG TAAATCACT GTTAACAAAA AAGATGTTGA AGAGTACATC	300
CCACACGCTG ACCTTCGTCT TGTCAATCAAC CAACCATTCG CAGTTACTTC AACTGTAGGT	360
TCATACGACG TTTTCGTTAA CGTTATAGGT GGTGGATACG CTGGTCAATC AGGAGCTATC	420
CGTCACGGTA TCGCTCGTGC CCTTCTTCAA GTAGACCCAG ACTTCCGCGA TTCAATTGAAA	480
CGCGCAGGAC TTCTTACACG TGAATCACGT AAAGTTGAAC GTAAGAAACC AGGTCTTAAG	540
AAAGCTCGTA AAGCATCACA ATTTAGTAAA CGTTAATTCG AAAGAATTAC TATACTTATA	600
CAGAGCACCT TTCGGGGTGT TCTTTTCTTA TACTTTCTTA CTAAATTGGT GCAATTGACA	660
CAGTTGTTC GACTTTACTC GCTTACAAAT GTGGCTGCAA CCTGACATGG TCAGTTGCCT	720
CAAAACGTTA ATCAATACGA TTATATCAAC GTTTCAAAGC ACTCAAGGGT TTACCCTATG	780
GGTGCTTTTT TCTATACTTT CTAAAAAGT TTACCCTAAA ATTTGCCCTA AAATTACCCT	840
ACTTATTTTT AAGATGTTGG TAGGCAACTT GTCCAGCAGA TAATGGAAC ATGTTTGAAG	900
TATTAACATA AGTCTTAGTT GTAACGGTAT CGCTATGAGT TAATGCTTCA GAAATGGCTT	960

1162

CTAAGCTCAT TCCTGCTTTT TTAGCAAGTG TCGCTCCTG 999

(2) INFORMATION FOR SEQ ID NO: 194:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2315 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

AATATTATCA CTGTTCTTGA AGGCAGAACA CAAGCTGTCA TCCGAAATCA CTTTCTTCGC	60
TACGATAGAG CCGTTCGTTC TCAAGTGAAA ATCATTACGA TGGATATGTT TAGTCCTTAC	120
TATGACTTGG CTAAACAGCT TTTTCCGTGT GCTAAAATCG TTCTAGATCG TTTCCATATT	180
ATCCAACATC TCAGCCGTGC CATGAGTCGT TTTCTGTGTC AAATTATGAA TCAGTTTGAA	240
CGAAAATCTC ATGAATACAA GGCTATCAAG CGTTACTGGA AACTCATCCA ACAGGATAGT	300
CGTAAACTCA GCGATAAAG TTTTATTCGC CCTACTTTTC GCATGCACCT AACAAATAAA	360
GAAATTCTTG ACAAGATTTT AAGCTATTCA GAAGACTTGA AACACCACTA TCAGATCTAT	420
CAACTCTTAC TTTTCACTT TCAGAACAAA GACCTGAGA AATTTTTCGG ACTCATTGAG	480
GACAATCTGA AGCAGGTTCA TCCTCTTTT CAGACTGTCT TTAACCTT TCTAAAGAAC	540
AAAGAGAAAA TCGTCAACGC CCTTCACTA CCCTATTCAA ACGCCAAATT GGAAGCGACC	600
AATAATCTCA TCAAACCTAT CAAACGCAAT GCCTTTGGTT TTCGAACTT TGAAACTTC	660
AAAAACGGA TTTTATTCGC TCTGAACATC AAAAAAGAAA GGACGAAATT TGTCTTTCT	720
CAAGCTTAGC TTTTCTTCAA CCCACTACAG TTGACAAAGA GCCTATTTTC GCTGATTCTC	780
CACTACATTT GACTGGATTC TAATTTTTTA GAGAAATACA AAAGAGCTAG CTTTAGCTAG	840
CTCTTTTCTT ATGCGGAGAG AGGGACTTGA ACCCTCACGA CCTAAAGCGG TCACAGGATC	900
CTTAGTCTCG CGCGTCTGCC AATTCGCCA TCCCCGCGTC GATTACTTTA CTAGTATATC	960
AACTTTTGGG ATGCTTGTC ACACTTTTTT TCAAATTTT TCATTTTCAC CAACCAGGT	1020
ACTCAAAAAG TTCATTAGA TTTTCATCTA CTAACCTAGC TCCGAGTGTA TTTTGGAAAT	1080
GACCTAGGGC AAATTGATGA TTTTCAGGCC AGATGGAAGC AACAGCTGGT TTAACAATCT	1140
CGATGTCATA TCCTAGATTA TAGGCATCTA TAGCTGTATG TAGGACACAG ATATCCGTCA	1200
AGACACCTGT TAAGATAACG GTAGACACTC TACGCTCTCT CAAACGAATA TCTAGGTCAG	1260
TCCCTGAAAA AGCTGAGTAA TGGCGTTTAT CCATCCAAAA GACACGACTG TCTGAACCAT	1320
GCTCTTGATA AAAGATCCCC AAATCTCCAT ATAAATTCCG TCCACTCGTC CCAATCAGAT	1380

1163

TATGAGGAGG AAATAACTTA CTTTCCGGAT GGAAACAATC GTTTTCTTCA TGAGCATCAA	1440
TAGTAAAGAA GATATAATCT CCTCGTTCAA AAGCTAATCG AGTTACCTTG CTGATGGCAT	1500
CCGAAATCGC CTGAGCTGGA GCACCTGCTG TTAGTTTCCC ACTATCAGCA AAAAAATCTT	1560
CTGTATAATC AATCGAAATT AAAGCCTTTG TCATTAGTAA TCTCTTTTCT TCACTTCTTC	1620
AAAAATATCT GAAATCAAGA CCTTAAGATA GGTTCCTTC ATTCCAAGTG AGCGACTTTC	1680
AATAATCCCC GCAGACTCAA GTTTACGAAG AGCATTGACA ATCAGAGAGC GAGTGATTCC	1740
GATACGATCT GCAATCACTG ACGCAGTCAA CTTCCCTTCA TTTCCATTTA ATTCCCCTAA	1800
AATTGCTGAA ACAGCACGGA GTTCGGAGTA AGAAAGGGTA TTGACCGCCA TGGTGACAGC	1860
AGTACGACGA CGAATATTTT TCTCATCTTC TTCACGTTGG AAGTTAAGAA GCTGAATCCC	1920
AACAACGGTA CTGGCAATCT CAACAAGAAC CAAGTCTCA TCTTCGAATT TTTTATCATT	1980
ACGCCAAATA ATCAAAGAAC CAAGGCGAAT CCCCATAACA TGAATCGGTG CAATAGTCGT	2040
CAAGCCATCT GGAAAAATCAT CTCTACTCTC AATAGGGAAA ATACTCATAT CATGCTCAAC	2100
AGGCAAGTTT GCTTCTGTTT CGTAAATCAT ATTAGCCCCCT TGAACGTAGT CATCTGGGAA	2160
AATCTTAGTT TGGGAAGATT GCTtACGCGA TCTGTATTG TTTTATAACG CATAAAATAG	2220
CCAAGCAGAC GTCCCTTACT ATTGATAATG CAGGCATTGC AATGAATAAT ATCCGCTAAC	2280
TGACGCGTAA TAGCGTTGTA AGGGAGCTCA TCTCG	2315

(2) INFORMATION FOR SEQ ID NO: 195:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6693 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

CGATTTCTTC CATTTCTTCA AATAAGAATA CTTTCTCTGA CATATGTGTT ACCTTCTTCA	60
TCAAAAATTA TTTTGTAATC GATTACATTG CAGATCGTAA CATAAAGAAA AACAGATGTC	120
AAATATTAAA CGTAAAAACA TGGTCACTAA AGAACTATAA GAGAAAAGGT AAACCTAGCG	180
ACGCGATGAA CGCTGGGTCG TTTGGTTTCG ATTGCTCTCT TCCTCTTGTT TTTTCTGTTC	240
TTCTTCTTGT TTTTCTCTAG CTTCCCTGGC CTCTTGTTTG GCTTTTTCCT CAGCTTCCAT	300
AATTAATTTA TCCGCCACAG TGTAGCTGTA GATTCCAGCT TCCATGTCGA CCACACTCGG	360
TTCTGACAAT TGAGGCTTAA TCTTACTGTA ATATGGCAGT TTCTTACTCA TTTCAGATAG	420

1164

AGGAACCAAG ACTTCGTCCG AATCATTCAT GGTCAATCGA ATTAAATCGG ATGTCACCTT	480
GCTTGGGGCT AATCCACCT TTTGGATAGC CGCCTTGAGT TCTGGGCTAA TTTGAGCAAG	540
TTCTGAGACA AAAACTTTGA TTTGTTCAT ATCATTAAG AGAACTGATA AATAAGTTTC	600
TGGTAAACTG TTCAGACTCA CAGAACTAGT CTCAAGCTGA CCACTGGAAA GAATAGGATA	660
ATGATTTTCA CCAGAAATAT AGTAGGCCAC AATATCATAT TCCTTGACCT TAATAGTGAA	720
CTTAGTTGGA AATTGATAGA CAAGTTGAGC TGATTCAACC CAATAGTTAG ACTTAATCTG	780
CTTTTCATAT TTTGCCTTGT CTAGCAGAAG GTTAATCGTA TAATCCGAAT CCTGAATGCC	840
TGAAGCCTGT CGAATATCAT CAGCTGTAGT TTGCACCGTT CCCTCAACAC GAATATCTTT	900
CATGGTCGCA TAAGGACTGA GCAAGTAGGC AGAGACAAAC AATAGAAGCA GACTTGGAAG	960
TAAATCGTG AAGGCTCGCA AGATATGGAT ACCAGGAATC TTTGCTTTGG CTGGTTTTTC	1020
CTTTGTAGCC TTTTAGCAA GCTTTTATC CTGTTCTCTC TTCTCTTTAG ACTCTGGTTC	1080
TTCTTTCTCT TCTTTCTCTT TGTCACTC TGAGGATGCT ACTTTTCTT CAGACTCTTC	1140
CTTAGCTGAT TCTGAATCTT CCTGGTCTGT TTCACTCTCC TGGTCCTGTT TATCCTCTGA	1200
CTTCTCAGAT TCTTCTCCCA TTCGAGCTTG TCTTCTCTT TCCTTCTCCT CAGCTAGAGC	1260
CGCCTCTTCT TCAGCCTTCT TTTTAGATA TTCTTGGTTT CGTTTCTGCC ATTCTGATAA	1320
CTCTTTCAAT TCTTCGAGGG TTTCTTTGTC CTCATTTTTC TTATCTTTTG ACATTTACTT	1380
TCCTTATGAT AAATCTTTTT TCAACAATG ATAAAAATCT GCTAGAGATT TCAATTCCTT	1440
AGAAGCTTTC ATCTTAGCTT GGTAACTTTC CTTGTGACTT AGTAAGTGAG AAAGCTTCTC	1500
TTCCAAACTA TCCAAGGTCA AATCGCTTTC TTGAAGGTCT TCTGCATAGC CTTTCTTAAC	1560
AAAGTAAGCT GCATTTTCAA TCTGGTCACC ACGACTAGCT TCACGACCAA GCGGCACAA	1620
GACATGCAAT TTTGCTATCG CCAAGAGCTC AAAAATCGTA TTGGCACCAC CTCGTGTAC	1680
AACAATATCA GCCAATTCCA TCAAGGGTGT ATAGAGATCG GTCACATAGT CAACACGAAA	1740
AAGATTTTGC CTCAACTCAT TCAGACTAGA ATCTCCAGTT AGATTGATAA TATTGTAGCG	1800
CTCTGTTAGT TCTTTCTTAT GGTCTGTAC CAATTGGTTA AAGACACGAG CGCCTGCAGA	1860
ACCGCCAACA AACAATACAG TTGGCAATTT GGGATTAAAG TGGGTTTGAA TATCCACCAA	1920
TTCATCTGGT TCTGGAGTGT TTTGTCCGA AACCTTGGTC ACCGCTCCCA CATGCTCAAC	1980
CTTAGCCAAA CTCGAAGCTT GTTCAAAGGT TGAATACATC TTAGTCGCAA ATTTATAGGC	2040
GATTTTATTG GCCAAGCCCA TAGACAGGTC AGATTCTGTA ATAAAGACAG GCACTCCTGA	2100
CACACGCGCA GCGATAACAG GCGGTACTGA GACAAAGCCC CCCTTTGAAA AAAGGGTCTG	2160
TGGACGCAGT CGCAACATGA TAAAGAGCGA TTGGACAATT CCCCACCAA CTTTGAAGAC	2220

1165

GTCCAGCATA TTTTGCCAAG AGAAATAGCG ACGCAATTTT CCAGTCGCAA TAGAATGGAA	2280
GGTGACATCC AAACCTGACT TAAGGATTTC TTGGTGTTCG ATACCACACT TGTCCCGCAT	2340
ATAGTGGACT TCCCAACCAT CTTCGATGAA CTTGGGCATT AACAAAAGAT TGAGGGTAAC	2400
GTGTCCAACC GTCCCCCAC CTGTAAAGAC AATTTTTC ATATTATCT TTTAACTCCG	2460
CTACTGTGTC GATAAAGAGC TCGCCACGTA CTTCAAAGTT AGCATACATA TCCCAGCTAG	2520
CATTGGCAGG ACTAAGAAGA ACCACATCTC CTTGAGTCGC AAGCTCATAG GCCTTGCGGG	2580
TCGCATCTGC AATATCTGTC GCCTCCACAT AAGCGACACC AGCCTTGTCT GCTGCCCGTT	2640
TGACACGTTT TGCAGATTGA CCCAGGATGA CCATCTTCTT GAGTCCAGTA ATGTCTGGCA	2700
CCAATTCGTC AAATCATTG CCACGGTCCA AACCACCTGC AATCAAGACG ACCTTGCTGT	2760
TGTCAAATCC TGACAAGGCT TTTTCAGTAG CCAAGATATT AGTTGATTTA CTGTCGTTAT	2820
AGAATTTAAC ACCCTTGATG TCATCCACAA ACTGGAGACG GTGTTTGACA CCACCGAAGG	2880
CTGAAAGAGT TTCCTTGATG GTTTGATTGT CCACATCAGC AAGCTTGGCT ACAGCAATAG	2940
TCGCAAGGGC ATTTTCCACA TTGTGGCTAC CTGGAACACC GATTTTCATC GCTGCCATGA	3000
CTACTTCACC ACGGAAGTAG AGTTGACCAT CTTCAGATA AGCTCCATCA ACCTTTTCAA	3060
GTGTTGAAAA TGGTACAACA GTGGCTTCTG TCTTGGAAGT CAAGTCTTTT GCCAAGTCTT	3120
GATTAAAGTT CAAGACAAGG AAATCAGCTG CTGTCATCTT GTTCTGGATA TTCCACTTGG	3180
CTGCTACATA TTCCGAAAAT GACCCATGGT AGTCGATATG AGTTGGCATG AGGTTGGTAA	3240
TAACCGCAAT CTCTGGATGG AATCTTGAA CACCCATGAG TTGGAAAGAA GAAAGTTCCA	3300
TAACAAGCGT GTCCTTATCT GATGCTATTT GAGCAACCTG ACTAGCTGGA TAGCCGATAT	3360
TCCCTGATAA AAGACCATGT TGGCCAGCAG CAGTCAAAAC TTCCCCAATC ATAGTCGTG	3420
TGGTTGTCTT ACCGTTTCGAT CCTGTGATAC CAATAATCGG TGCTTCTGAA ATCAAATAAG	3480
CCAATTCAC CTCAGTCAAG ACTGGAATTC CCTTGGCCAA AGCCTTTTCA ATCATGGGAT	3540
TGTTGTAGGG GATACCTGGA TTTTTCACCA TAAGGGCAAA CTCTTCATCC AAGAGTTCCA	3600
AAGGATGGCC ACCTGTAATG ACCTTGATCC CTTCTTCCAG CAAACTTTGG GCAGCTGGAT	3660
TGTCCTCGAA AGGTTTCCCA TCATTTACTG TCACAATGGC ACCTAGCTTG TCCAACAAAC	3720
GAGCTGCAGA TTCACCAGAC TTGGCCAAAC CTAAAACAAG GACTTTCTTA TTTTAAATT	3780
GATCTATTAC TTTCATGTCT CGAACTCCAT TTCTACTCCT ACTATTTTAC CATTTTATG	3840
GAAATAAAAA AGCCACAAAG TGTGTTGTG ACTCTTCTT CTAACGAAT CTTACCATAT	3900
CATCTATGTG ATAAATCGGT AACTCGAATG ACCTGATCCA CTGCTCCCA AATCAGAGGA	3960

1166

TTATGGGTCG CAATAATAAT GGTCCGATTC GGATTTTSTA AAGATTCCTAG GATGGAAAGT	4020
AATTCCTCAG AGTTTTTGGG GTCTAAGGAA GCGGTTGGTT CATCTGCGAG GATCAAAGGT	4080
GGATCCTTTA AAAATTATCTT CGCTAGTGCA ACACGTTGTG CTTCTCCTCC TGATAACTCA	4140
AATATAGGTT GCTTCAAATC CAAATAAGAG AGGTTTACAC GGTTTAGAGC TTGTTTCATC	4200
AAAGAGATTT TCTCTTTTTC CTTCAACTTT TTACCAACTA AACCCAGATT GAGATTCTCT	4260
TTGACGGTTT GGCTTTCAT TAAGCCAAAA TCTTGAAATA AGTATCCTAA GTAATCTCTA	4320
AAGAAAACAG AAGGCTTGAT GTCCTTAAGA GAAGTGCCAT CATAGATGAT TTGCCCTTTG	4380
TCATATGGCT CCAATCGTCC AATCATATTC AAGAGTGTG TCTTACCACA GCCACTTGTA	4440
CCGATTAAGG CATAAATTTT CCCACCTTCA AAATGAAGAT TCATATCTGA AAATAGCTGA	4500
CGGCTTCCAA ATTTTSTAGA TATATCTTTT AGTICAATCA TCCTATTTTC CTTTCATAAT	4560
TGTCATAGAA ACACGAGATT CTTTCTGCGC TTGACGGTAA AGCGTCAAAA CTGCACTAGC	4620
TAGAAAGACC AATAAAGTGA GCAAGCCAAT CACCAAGTCT CGACTGCTTA AAATAAAGAG	4680
ACTAGCACCA AATACAAAAC TAGCAAATG GCTAACCATA TACTGAGCAT GTGTTTCAAA	4740
AAATCGTAAA CCTGAAATTC GTTTAATCAA GATATCTCGG CGGAATTGCT CGAAATATAG	4800
AAGATTGACA GAATAAAGA GTAACAAGGA ACTGGCTATT CCAACAATAG CTCCTAAGAT	4860
TAAAGTTGCT GTTTCAGTTT GAACTTCATT ATAACGAGTT AGATAAACAC TTCTTCCTTC	4920
TTTAAGATAG GATACTTGCT CATAAATTC AGCTTTCTTC AAGAGTTCTA GCCCACTCTC	4980
ATATCCTTTG ATAAAGAGTT GTTTTCCAGC ATTGATAGAC CAACTAGATA AGGATATAAA	5040
ACTATCACCT GTAGAAGTCG GCGTGAATAC CACTAAAATC GGATCAGTCA AATACTGAGT	5100
AGATACGGGA TTCTCACCGT TATTATAAAC AAACCGCTTT TCTCCCATTTG AAAGATAACT	5160
AACGTGCGCT TTCATCTCAT AATCCAAAGG AGCACTTGCC TCCTCACCAG ATTTTCCATA	5220
ATAACTCAAT CTTTCTTCAA AAACTTTCTT AAGTTCTGCT TCTCGAGAGC GCAATGTTC	5280
TGGGAGCAAG AGGATAAACT CACCTTTTTG GAGATGGGCT AACTTCTGTT TGGTCTCAGC	5340
ATCTACCACG ACCTTTTCCT TGTCCAAATA ACTGGGACTA ACATAGAGCG TATTAGCATC	5400
TGAACATAG GTATCCAGTG TCTCTCCCTG TTCATTTTTT CCTGTGGAT TGGCAAAATG	5460
GAGCAGATTA TCCTTTACAT AAAGAGCTTG TTCTTCTTCG ATTGCTTCCT TGGCAAAGGC	5520
ATACCACTTG CTCTGATTTT CTGTATCTTT TCCTCTATCA CCTAAGCCAA AGGAAATCTG	5580
GTAATAGTCT GCTCTGTCCT GCCATGCTTG TTTTGAAATT TCAAGTTCTT TCAATCGTTG	5640
GTAAGACGTC AAACCTGTCT TAACAGCGTA GCCTACTGTA AAAACAGCTA CTAAGTACA	5700
CAATAGGGTT AAAGCCATCA AGCGTTTAAG GGGTAATCTT CCCTTAATAA CGGGAACATA	5760

1167

TGCTTTGTAA CTCAAACCTCA TTAGGTAAAG GAGCATTAGT AAAATTGAAA TCGCCAATAA	5820
AAACAACAGA TAGAACTAA TCCCAAAACC ATAGTGGCT AACAGATAG GATAAAACAA	5880
ACCTTGACTA AAAAGAACGA CTCCCCACC TAGGAAGGAA AGGAGGGCTG ATAGAAGGAG	5940
CCATTTGATA TCAGTAGATA AAGAATGCCC CATGATGGAT AAGAGAGTCT GACCAGAAAA	6000
GAGTTTATA CCTGCTGCTC TCATTTCTT AATCCGAGTG ATAATCACTA AAGCAAAGAA	6060
AGATAAGCCA AATATTGCTA AACTAATTAA AATAAGGGGA TTTAGTAATA TTCGAAAAGC	6120
AAGAAAATAG GCGGTATCT TTCGGTCAGC ACTTGCTTTA TAACCCAAAT CTCCTAATTT	6180
ATCGCAAGC TTTTCTTCG TCAAGGAGCC TGACAAAAGG AGATAACTAT TTAGCGGAnT	6240
AtACGTTTAC GACTTTCTTG GCTAGCTTCT TGGAATTCTT TTGGTAAAGT TCCCTGACCA	6300
TAAGTTGCAT AAGTAAAGTG AGTCGTCCCA TCCTTACTCG GCTCTACAAT TCTTCTAGCT	6360
ATTAACTCT GTTCTGAGTT TGCAAAATTC TCCAATTCCT GTTCAAATAC CTCACGCGTC	6420
GGTTCCTGAG TATCTTTTTT GACACGAAGT AAAGAAACGG AATCATAGCT TGCATATAAA	6480
TATTGTGGCG CACGTAAGAC AATAATCCAA GCAAGGAAGA AGCTGAGAAA AAAAGTTGAT	6540
AATAATATGA ATAGTTTCTT CATAGTAGAC TCCTTGTAAG CAAAATTCCT CCTGTAATTT	6600
CTTACAAGGG GAACGATTTA AATCAATGAA CGATTAGTCA TAATCACAGT AAAATGCTAC	6660
TTGTCTCTCC CATTTAGTCC AAATCCATGC AGG	6693

(2) INFORMATION FOR SEQ ID NO: 196:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 1847 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

CCGGTCTATG TACCCACTAC TTTGGGACAA TATGGGGATC AGCTACCCAA AACTAATCGA	60
GCGTTTGTT GACCTTGCCA AGGAAAGTTT TGACAAGCGC GACGATTGA TATAAATGA	120
AAGAGAGGGT ACAAGCCAGA ACCATCACTG CACGGTGACT AGAGTTCTCG GACTTCAGCC	180
CTTTTAAAG GAGTAGAAAT GAAATTAACA ATCCATGAAA TTGCCCAAGT TGTTGGAGCC	240
AAAAATGATA TCAGTATCTT TGAGGACACC CAGTTAGAAA AAGCTGAGTT TGATAGTCGT	300
TTGATTGGAA CTGGAGATTT ATTTGTGCCA CTTAAAGGTG CGCGTGATGG CCATGACTTT	360
ATTGAAACAG CCTTTGAAAA TGGTGCAGCA GTAACCTTGT CTGAGAAAGA GGTCTCAAAT	420

1168

CATCCTTACA TTCTAGTAGA TGATGTTTGG ACAGCCTTTC AATCCTTAGC ATCCTACTAT	480
CTTGAAAAAA CGACTGTTGA TGTCTTTGCT GTTACAGGTT CAAATGGCAA GACAACGACT	540
AAGGATATGT TGGCGCATTT ACTGTCAACA AGATACAAGA CCTACAAAAC ACAAGGCAAT	600
TACAATAATG AGATTGGCCT TCCTTACACA GTTCTTCATA TGCCTGAAGG AACAGAAAAG	660
TTGGTTTGG AGATGGGACA GGATCACTTG GCGATATTC ATCTCTTGTC TGAATTGGCT	720
CGTCCAAAAA CAGCCATCGT GACCTTGGTT GGAGAAGCCC ATTTGGCCTT TTTCAAAGAC	780
CGTTCAGAGA TTGCTAAGGG AAAAATGCAA ATTCAGACG GAATGGCTTC AGGTTCCCTG	840
CTTTTAGCGC CGGCTGACCC TATCGTAGAG GACTATTTGC CAACTGATAA AAAGGTGGTT	900
CGTTTTGGGC AAGGGGCAGA GCTGGAAATT ACTGACTTGG TTGAGCGCAA AGATAGTCTG	960
ACCTTCAAGG CCAATTTCTT AGAGCAAGCC CTTGATTTGC CAGTAACTGG CAAGTACAAT	1020
GCGACAAATG CTATGATTGC ATCCTATGTT GCCTTGCAAG AAGGAGTTTC AGAGGAGCAA	1080
ATTCGTTTGG CCTTCCAAGA TCTTGAATTG ACGCGTAACC GTACCGAGTG GAAGAAAGCA	1140
GCCAATGGAG CAGATATCCT GTCAGATGTT TACAATGCCA ATCCAACGTC TATGAACTG	1200
ATTTTAGAGA CTTTCTCTGC CATTCAGCC AATGAAGGTG GCAAGAAAAT TGCAGTGTG	1260
GCGGATATGA AGGAGCTTGG TGACCACTCT GTTCAACTTC ATAATCAGAT GATTTTGAGC	1320
CTTTCTCCAG ATGTGCTTGA TACCGTGATT TTCTATGGAG AAAATATTGC TGAATTAGCC	1380
CAATTGGCCA GTCAAATGTT CCCAATCGGC CACGTTTACT ACTTCAAGAA AACAGAAGAC	1440
CAGGATCAAT TTGAAGACCT AGTCAAGCAG GTCAAGGAAA GCCTTGGAGC CCATGACCAA	1500
ATCCTGCTCA AAGGCTCTAA CTCTATGAAT CTAGCCAAGT TGGTAGAAAAG TTAGAAAAAT	1560
GAAGACAAGT GATTTTGTCA AGTATTTGCA AAGAATGATT GCCATTACAG ATACTGGCTT	1620
AACCTTTACA AAAGATCCGT TTGACCGTGA GCGCTACGAA GACTTGCGAA GTCTGTTATC	1680
TGAAATGTTG AATCAAGCAT CAGACCTGA TTCCGAAGAA GTGGCAGAAG TCTTGAAGCC	1740
AACTTCTGCT TATGCCACTC CGTTAATGGA CGTCCGTGCT TGGATTGTTG AGGATGAGAA	1800
GATTTGTCTG GTTAGGGGAC AAGGAGAGGA TAGTTGGGCT TTGCCCGG	1847

(2) INFORMATION FOR SEQ ID NO: 197:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1062 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

1169

CAAGCGAAAA CATTTTAT TCCAAATAA CAGAGCATTT TAGGAGAACA AGAGATTTTG	60
AATGCCAAGT CGATCTGGC CTTGCTAGAC GCTTTGGAGT CACATAGCTA TGATGTAGTC	120
TATCTCCGTC AGCCTCTTAA TCGTCTCGAA TATATCGAGT GTGCGATAGT GGGGCAATCA	180
CAATTTCTCT TTAAGGTCAG TTATGCTGAT GGTCAAAAGG CTTACCGTGT CGATCTTCCT	240
GACCTACTAA CAAAGACAGA CTGGCAGATT ATCAAGTCAT TTTTAGATGC TTTGCTTGCT	300
TATACAGGGA CTGATATTGA AGGGCTAGAT GGTTTTGATT TTGAAGCTTA TTTCCAAGCA	360
AGTATTCAAG CCTATCTAGC AGACCCTGTA GCTCGTTTGA CGATTTGCCA AGGAATTTT	420
AATCCTATTT TCTTTAGTCG TGAGAACTTG AAAAGCTTTT TAGAGGCAGA TGGCTTGCT	480
CAGTTTGAAG CGCGTGTGCG TGGCGTTCAA GAGACAGATG CCTACTTGC GAGAGTTTCC	540
TTCTATCAGG ATGGAGAAGG AAAAGTGCAT GGCCTTTACC ATCTAGCTCA AGGAGTCAAG	600
ACAGTTTAC CGAGAGAACC GTTTGTTTCT GCAGCCTATA TTGAGCAATT GGTGGATAAG	660
GAAGTCCAGT GGGAGATTGA CTTGGTTCAA ATCACAGGAG ATGGCTCTAA ACCAGAAGAC	720
TATGAAGCCA TTGCTCGCTT GGAATATGCA AAATTCTTAG AGGTATTACC CCCATCTTTT	780
TACCACCAAC TAGACGCCAA TCAAATAGAA GTGCAACCCA TATTAGACAA AGATTTTAAA	840
ACATTAGCAC AAGAAAAGTA AAGCAGAAGC AGGTCAATCG ACTTGCTTTT TTGACATAGA	900
AAAAATCCTG CCAAGATGAC AGGATTGCTA CTCAATGAAA ATCAAAGAGC AACTAGGAA	960
GCTAGCCGCA GCTGTACTTG AGTACGGTAA GCGAAGCTG ACCTGGTTTG AATTGATTT	1020
TTGAAGAGTA TGAAGTTTAA AGAAAAGCCA AGATACGAAG AT	1062

(2) INFORMATION FOR SEQ ID NO: 198:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6846 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

TATCTACAAC CTCAAAAACA TGTTTTGawG gCTCGTCAGT cTATCTACAA CCTCAAAAAC	60
ATGTTTTgAa kGctcGTCAG tTCTATCTAC AACCTCAAAA ACATGTTTTG AcaGCcTcGT	120
CAGTTCTATC TACAACCTCA AAAACATGTT TTGAGCTGAC TTCGTTAGTT TCATCTACAA	180
CCTCAAAAAC ATGTTTTGAG CTGACTTCGT TAGTTTCATC TACAACCTCA AAAACATGTT	240
TTGangnCnT CGTCAGTTCT ATCTGCAACC TCAAAGCAGT GCTTTgagcG CTTCGTCAGT	300

1170					
TCTATCTACA	ACCTCAAAAC	AGTGTGTTGC	GCAGCCTTTA	ATCAGCCGCC	TAGTCCGCTC
360					
TATGGTATTC	ATTAAGTCAA	CATCTCTTGT	TTAAGAGCAC	CAAATCAGGA	AATCTTCTCG
420					
ATTCCCTGAT	TTTTTCTATT	TACGTTTTTCG	TGTTGAGCTA	CGTTCGTGCA	AACCATGAGG
480					
TAAGAGAACT	TCACGTTCTT	CCAACTCTTC	CTTATGCATA	ATCTTGGTCA	ACATACGCAT
540					
ACTAATGGCA	CCAAGGTCAT	AAAGAGGTTG	GGCAATCGTT	GTCAAGTTTG	GACGGGTAAA
600					
GCGTGAGATT	TGTGAATCAT	CACTAGTAAT	AATTTCAAAA	TCTTCTGGCA	CAGAAACACC
660					
CTTATCAGCC	AAACCGTTCA	AGACTCCTGC	TGCCAACTCA	TCACCTGTCA	CAACTGCTGC
720					
AGTTGCATTT	GATGAAATCA	AACGCTCTGC	TAAGGCGTAA	CCATCATCAT	AGCTATATTT
780					
AGATTCAAAT	ACCAAACCCT	CACTATAAGT	GATTCTCTGCT	TTTTTCAAGG	TTTCCTTGTA
840					
GCCAACTAAA	CGAACCTTAC	CATTGATGTC	ATCCACTAGC	GGACCGCTAA	CGAAAGCAAT
900					
ACGCTCATTT	TCTTTAGCAA	GGTAACTCAC	TGCATCAATT	GTTGCTTGCT	TATAGTCAAT
960					
ATTGACACTT	GGCAACTGCT	GCTCAACATC	GACAGTTCCCT	GCGAGAACAA	TCGGAGTACG
1020					
TGAACGCGAA	AATTCTGAGC	GAATTTTATC	TGTCAAGTGA	TACCCCATAT	AGATAATGCC
1080					
ATCTACCTGC	TTTGAAAAGA	GGGTATTGAC	AACAGAAACT	TCTTTCTCGT	TATCTTCATC
1140					
GCTATTAGCT	AGGACAATAT	TGTACTTGTA	CATTTCTGCA	ATATCATCAA	TCCCCTTAGC
1200					
CAAACCTGAA	AAATAACCAT	TGGTAATATT	TGGAATCAGC	ACACCGACAG	TGGTTGTCTT
1260					
TTTACTTGCA	AGACCACGCG	CAACTGCATT	TGGACGATAA	TCCAAACGAT	CAATTACCTC
1320					
TAGCACTTTT	TTACGGGTAT	TCTCTTTTAC	ATTTTATTTG	CCATTGACCA	CACGGCTGAC
1380					
CGTCGCCATG	GAAACACCTG	CTTCACGAGC	GACATCATAA	ATGGTTACTG	TATCATCTGC
1440					
ATTCATTCCCT	TTTCCTGTCC	TTTCTATCTC	ACACATTCTT	TTACAAGTAG	AGGTACTGAT
1500					
TGAAGCTCTA	TATCTACTTA	CAAAAGTGAA	GATGTGAAAA	TTTCGTTTTC	ATATTTCTAC
1560					
TTATTCCATT	CTATCACTAA	TTGTAAACAC	TTTCAAGTGT	TTTTTGAAGA	TTGATTGAAA
1620					
AAATTTTATA	GAAAACCTAG	GTTTAGCTCC	TTGCTACCAC	CTTAGACTAA	ACAAAAAGGA
1680					
GGAAACTAAG	CCCTCCTAAA	GTTATAGTAA	AATGAAATAA	GAACAGGATA	AATCGATCAG
1740					
GACAGTCAAA	TCGATTTCTA	ACAATGTTTT	AGAAGTAGAG	GTGTACTATT	CTAGTTTCAA
1800					
TCTACTATAG	GTATTGTTCC	ATTCACTACC	GTCAATTTTA	GCACATAGTC	TTCATGAAAA
1860					
TATTATATCA	TCATAACCAA	CCGATTCTTT	TCGCGATATT	AGCTGCCTCT	GTTGATTAC
1920					
CTGCATCTAG	TTTCGAAAGA	ATATTGGTGA	CATAGTTTCG	GACTGTTCCG	TTGGATAGAT
1980					
AAAGTTTGTC	TGCAATTCTT	TGGTTAGAGA	AGCCCTGAGC	AATTCCTTTT	AAAACGCGA
2040					
TTTCTTGCTC	CGTTAATGGA	TTGGGATGCA	TCATCACCAC	TTCCATCAAT	TCAGGCGAAT
2100					

1171

ACTCCTTGCG TCCTTCGAGG ACGGTGTGCA AGGTTTGCA TGGTTTCTTT	2160
CTTTTAATAC ATAAGCATCT ACTCCAGCCT TGACCGCAGC TTCAAAATAC CCAGGACGCT	2220
TGAAGGTCGT CACCACAACC ACCTTTGTTT CAAGCTTTTC TGCTCGTATC CACTCCAAGA	2280
CTTCAAGACC TGTCCTAACA GGCATTTCTA CGTCAAGGAT GCGCATATCT ACAGACTCCT	2340
TTTCTAATAG TTGGATTGCT TCTTGCCCAT TCTTGGCTTG AAAGACAGAC TCTACATCCG	2400
GTTGAAGCAT GAGCAACTGG CACATGGCAT CTCGCAACAT ACTTTGATCT TCTGCGACTA	2460
ATACTTTTCT TACTTTCTC TCCTTATAAA GTAGTCGAAC CTGCACTTCA GTTGGATGTT	2520
TCTGACTGAT TACACTTACT TCTCCTGAAA ATGGAAAAAC ACGATTTCCG ACTGTATGGA	2580
GCTCATCCCC GCTTATAGAG GCAAAGCCAC AGCCATCATC TCTCACTGTT AGAATGAGTT	2640
CTTTCTCTGT CCGTTCTAAT TTCAAGTAGA CTTTAGACGC TTTAGCATGT TTGATGATAT	2700
TGGTCACTAA TTCAAGCAA ATCATGGAAG CCGTTGACTC CAATTCCTGA GTTAAGCTAG	2760
ACTTGTCCTCA GTGATTCTCA ACTTGAACCT CAATTCAGC AATTCTAAC ATCTTTTCTCA	2820
CAGTCTCTAG TTCGGATGTC AAAGTTCTAG ACTTAAGATT TTCCACAATG GTTCGCACTT	2880
CATTCATGGA TCCCTGCTGA TCTGGTGAAT TTCTTTTAAT TCCTTTTCCA CCTGTGGATA	2940
AGCCTCCATC TGAAATAACT GCAAGGCTAA ATCTGTCTTG AACTCAGCA TAGCAAAGGT	3000
ATGTCCCAGA CTATCATGCA AATCCTGACC GATACGACTA CGTTCATTTT CAGCAAGCAA	3060
TAGATTTATC TGAGCATTTT GCTTGACCTG AGCTTCTTTC AAATCCTCGA CAATACGAAT	3120
CCGAACCAAT CAAAAGTCA TTAAATCGAC AAAAGTAAGA ATTACAAGTA GATAGAATAG	3180
AAACTCAACT TCGATTCTCT GAAAAATCAA CAGTTGCCCC ACAACAAGGA CTTGAGCAAG	3240
AAGAAAAGTC CAGACATGTA AAGACTTTAA ACTACGTACG CTGAAATGAT AACTTAAGAG	3300
ATTGGATAGG AAAAAGAAAA ACCAGATATA ATTAACAGCA ACAAAGGCAG TATTTCCAAC	3360
TACATAAGTC AGCATGAGGC CCCAATATAG CCAAGATAGG CGCTGGCTCT TAGTTGTTAA	3420
AACACCCAAA TATGCCACTA CAAATAGAAT ATCAATCAAT AAATGCCAGG CAGAAAGCCA	3480
CCCAGTCACT ACAGACAGGA TGGGGAAAAT CATAAAAATT AACTGATCC AAAACATATA	3540
ATGTATTCTT TTCAGTCTTT CAAGCATTA AATCTCTCT TATGACCTTG AAGGTAAATG	3600
GTCAAACCAA ACAAACACTAC TGAAAAACA AGTAAATAAA CTGTGGCTGA TAGATTGATG	3660
CCACCCTCAT TTAAGAAGGT CTTGAGCAAC TCCATCAACT GATAGGTCGG GAGACACTTA	3720
CCTACTACTT GCATCCAGTC TGGAATAAAA GAGATAGGCA TCCAGAGTCC ACCTAAAACA	3780
GCCAACCCTA GATAAAGAAG ATTGCCCACG ACAGACATCA ACTGACTAGT TGGTAAGAGA	3840

1172

GTCAAGGTCA AACCAAGCGC TACGAAGGCA ATACTTCCTA CTATCAGCAA AAGTGCAGCC	3900
CCAATCCAAT TTCCAAGAGA CATGTCCACA CCTCTTACAA AATGCCCAAC TGAGAAAACC	3960
ACCAAGATTG AAACCAAATA ATCAACCAGC ATACTTGTTA TCTTTGATAG ATAATATTCT	4020
ACCATATTTA CAGGGCTATG ACGCAATGTT TTC TGCCAGT TGTGTATCTT GTCGGTATGT	4080
AAAACAACTG GGAATGAGAA GATACCTGTT GACATCATGG AAAATGCAGT CATGGAGATA	4140
AGATAATCAC GCATAAAATT CGCGAGTTCA CCTGGTGTGT CCTGATAGAT ACCAGAAAAA	4200
AATAAATAGA AAGCCGTCGG CATCCCTACT GACAATAGAT AATAGATCAA TTGTCGTTTG	4260
GTCAATAAAA ATTCTATCTT ACTAAGTGCT AGCCATCGTT TCATCTTAGT TATCTCCCTT	4320
CTGCGTTTCT TCAAAGATTG TATCCAACAA ACTACGATTA TTAAC TTCAA TTTCTTGTAT	4380
GCCACATCCT GCTTGAATA ACAGTTCCCA AAAAGCATCT GCTTCGCGTG TGACTACTTG	4440
TAGAGCATCC TGTTTTGTG ACCAGTTTTC AACCAAGTTA GACTGCTCAA TGACTTCCTT	4500
GTATGCCAGA GGAAGGATAA AATGCTTTTC AATTCCTTCA CTACGCATAG CTAGAGGCGT	4560
CGTATCACGA ATCAACTCTC CCTTATTTAA AACCAAAATC CGGTCAGCCG TATGCTCTAC	4620
CTCTTCAATA TAATGAGACG AATAGAGAAT CGTGACTCCT TGCGCTTTTA GGTCCCAGAC	4680
GATTTCCCAA AAGCGTTGAC GAGTTGAAGT ATCCATGGCA GCAGTTGGTT CATCTAAAAA	4740
GACAAGCTTT GGTGCGCCAA TCAAGGTCAA GACAAAAGAG AAGAGACGCT TTTGCCCCGC	4800
TGACAATTTT TCTGCGAATT GCTCTTTTGG TTGCTGGTCA AACTGCAATA GTTGATCGAT	4860
TTCTTGATCG CTCAAGGAAT TTGGATAGAT ACGTTGAAAG AAAGCAATCA ACTCTTTGAC	4920
CTTTAATTTT TGAACGATGA CATTTTCTTG AGGCAGATAA CCTCTAATAT AGTCTAACTG	4980
AGAACTCGTC ACTGACAAGC CTTGGATGGA TACTTGACCG CTGTGACCA GTTTATCTCC	5040
AAGCAGACAG TCCAAGAGTG TGGTCTTCCC AGCACCATTG GGCCCAATCA AGGCGACGCA	5100
TTCACTTTCA GTIACCTCAA AGGAAATACC CTTCAAATA GCCTTGCCCT TGATGTTTTT	5160
ATTTAGGCTT TCTACCTTAA TCATATTCAT GATATTCTCC TTTCAACCAC TCCATTCTCA	5220
TAAGGAAAAC GACGAAAATC ATAAATCCAA ACCCCAAAGC ACCACGAATG AATTGGCGAA	5280
gCAAGGTTTG GTCAAACCAA CCTGTAAACA TTTCCACTAA CCATACCAAG AGTGACAGGC	5340
CGATAAAGAA ATAGATGATC CCTCTCTTCA TTCCTCAAGC TCCTTTTTCAT CATCTCCGAC	5400
TAATTTCAA CTTTCTCTAA CAAGCCAAGA CATCATTTCA AAGCCAGCAA AGAGCTCCCA	5460
AGGAAAATGA TAGAACTCT CATCCAATCC CGAAAACATG AGTTAGGTCA TAACTCCTGC	5520
TACTACTAAA CTCACTGCGA TAATCATTTT ATTTCTCATC TCTTCTTCCT CCATTTCATA	5580
CTACAATTAT AGTCTTTTGA AATCAGAGGA GACAGAAGCT TCTGTCACTA GAAAATATGA	5640

1173

CAAATGTCAT AAAAAATTCT GTTCAAAACA AGCAAGATAC ACTATACAAT AAAACACAAT 5700
 TAGAAAAATC TAAGGCAACT TCCTCAAAAG AGATATCAAA CCCAATTCAC ACCATAATGT 5760
 AAAC TAATAC TTATTTAAAA TCAAAAAGAG TAGAAATTTT TATCAGACAA ACACATATAT 5820
 AGTGATTGA ATCTATAACA GTAGGCCTTA AATACTAAAA TATTTCTATA AATTAATTTA 5880
 ACTTTCCTGA TAGAGCTGTT CATATCTTAT TTCAATTCTC TAAATTATAC GTTGAACAAA 5940
 ACCCTTCTAT TTCTTTCTTA AAGATTTATA AGAGTTATAA AATCTGTAA ATTTCAATGT 6000
 GTATACCTAA ACTACGCTAT TTATTGAAAA GACTGGAGAC AAAAAGTATA CGCTGCCAAA 6060
 ATGAATTAAT GAAAAATCAAA AAAGAGAGAA CCAAACCTGAT TCCCTCTTAA TGTATATAAT 6120
 ATCTAGTTTT AAAAAATACAC ACTCACATAT CTCTGTAATG AATCGGGAAG ACAGGATTCG 6180
 AACCTGCGAC ACCTTGGTCC CAAACCAAGC ACTCTACCAA GCTGAGCTAC TTCCCAGGTT 6240
 AAATAGAAAA ATGCACCCCTA GAGGAGTCGA ACCTCTAACC GCCTGATTCTG TAGTCAGGTA 6300
 CTCTATCCAG TTGAGCTAAG GGTGCTCCAT ATTATGCCGA GGACCGGAAT CGAACCGGTA 6360
 CGATCGTTAC CAATCGCAGG ATTTTAAGTC CTGTGCGTCT GCCAGTCCG CCACCCCGGC 6420
 CTCTCTAAGC GAACGACGGG ATTCGAACCC GCGACCCCA CCTTGGCAAG GTGGTGTCT 6480
 ACCACTGAAC TACGTTCGCA CTGTTTCTT CTATCTAAAA ATGCCGGCTA CATGACTTGA 6540
 ACACGCGACC CTCTGATTAC AAATCAGATG CTCACCAAC TGAGCTAAGC CGGCTCATTT 6600
 GTTATATCTT AATGCGGGTT AAGGGACTTG AACCCCAACG CCGTTAAGCG CCAGATCCTA 6660
 AATCTGGTGC GTCTGCCAAT TCCGCCAAAC CCGCATATAT GACCCGTAAT GGGCTCGAAC 6720
 CAGTGACCCA TTGATTAAAA GTCAATTGCT CTACCAACTG AGCTAACGAG TCTAAAATAA 6780
 cTTGCGTTAC CTAAACGGT CCCGACGGGA ATCGAACCG CGATCTcGCC GTGACAAGGC 6840
 GACGTG 6846

(2) INFORMATION FOR SEQ ID NO: 199:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2911 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

GAATTCATTT TAAATAAAGA TACGGGAGAG GTAAGTGAAT TAAACCTCA TAGGGTAACT 60
 GTGACCAATTC AAAATGGAAA AGAAATGAGT TCAACGATAG TGTCGGAAGA AGATTTTATT 120

1174

TTACCTGTTT ATAAGGGTGA ATTAGAAAAA GGATACCAAT TTGATGGTTG GGAAATTTCT	180
GGTTTCGAAG GTAAAAAGA CGCTGGCTAT GTTATTAAATC TATCAAAAGA TACCTTTATA	240
AAACCTGTAT TCAAGAAAAT AGAGGAGAAA AAGGAGGAAG AAAATAAACC TACTTTTGAT	300
GTATCGAAAA AGAAAGATAA CCCACAAGTA AACCATAGTC AATTAAATGA AAGTCACAGA	360
AAAGAGGATT TACAAAGAGA AGAGCATTCA CAAAAATCTG ATTCAACTAA GGATGTTACA	420
GCTACAGTTC TTGATAAAAA CAATATCAGT AGTAAATCAA CTACTAACAA TCCTAATAAG	480
TTGCCAAAAA CTGGAACAGC AAGCGGAGCC CAGACACTAT TAGCTGCCGG AATAATGTTT	540
ATAGTAGGAA TTTTCTTG GATTGAAGAAA AAAATCAAG ATTAAGATAA AAGCTATAGA	600
AAAAATGGT TTATGTACTG AGATTAGATA GTGAGGTGAT GACATAGTTT TGTGAAAAATA	660
GCCATTTATA ACTCAATTAT TTAGTTTACT TTACTTTACT AGTGATACTA TTTGGAGTTA	720
TTAATGGACT TAGTTTATAT AACTAATGAA TTGATGAAA GGGTTAGTAT TGACAAATATT	780
GGTCATATTG ACTAGAAAAT AGAGTCTATC AAAATTAAAA GGCTAATAGA GGTGATGAGA	840
CAATTCGGC TCTTTGTCAA CTGTAGTGGG TTGAAGTCAG CTAAGCTCGA GAAAGGACAA	900
ATTTGTCCCT TTCTTTTGTG ATATTCAGAG CGATAAAAAT CCGTTTTTGT AAGTTTCAA	960
AGTTTCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT GAGATTATTG GTCGCTTCCA	1020
GTTTGGCATT AGAATAGTGT AGTTGAAGGG CATTGACAAT CTTCTCTTTA TCTTTGAGGA	1080
AGGTTTGA GATGAACCT GATTGAGATT GTCCTCAATG AGTCCGAAAA ATTTGTCAGG	1140
CTCCTTATTC TGAAAGTGAA AAAGCAAGAG TTGATAGAGA TTATAGTGGT GTTCAAGTC	1200
TTCTGAATAG CTCAAAAGTT TATCTATAGT AGATTGAAAC TAGAATAGTA CACCTCTGCT	1260
TCTAAAACAT TGTTAGAAAT CGATTGACT GTCCTGAATG ATTTGTCCTG TTATTATTTC	1320
ATTTTACTAT AAATCCACGT TTACGAATCT CTTCCACAC TTGTTCAATG GGGTTCATCT	1380
CTGGTGTGTA TGGAGGAATA AATGCAAAC CAATATTAGT CGGAATCTTT AAGGTACTTG	1440
ATTTATGCCA TATAGCATTG TCCATAACGA GTAAAAGATA ATCATCTGGA TAAGCTTGTG	1500
AAAGCTCCTA TTCCTAAAGC CCTTTTATAA CCTCTTGCGA GAGAGACTAT TGA CTGAGCC	1560
CTTACTTCAT GCGGATGAAA CTTCTTATCG GGTTCAGAG AGTCATAGCC ATCTGACCTA	1620
CTATTGGACC TTTTGTCTG GGAAAGTTGA GAATCAAGCA ATCAGCTGT ACCATCATGA	1680
TCAGAGTCGG AGTGGTTCGG TAGTACAAGA ATTCCTAGGA GATTATCTG GCTATGTTCA	1740
TTGTGATATG TTGCGGCAGT AACTTAGGAC TTTAGTCCTC TAGTTCTGCC TATGCGATAG	1800
CAGTCCAAGG TTTAGGAGCA AGGCGACGCT AAGCTTGGA AACTGCGAAC CGCTAGAAGC	1860
TTATCGTCAA CTGGAAGAAG CTGAACCTGT TGGATGTTGG GCGCATGTGA GAAGGAAATT	1920

1175

TTTTGAAGCG ACCCCCAAGC AAGCAGATAA ATCATCCTTA GGAGCTAAAG GTTTAGCTTA 1980
 TTGTGATCAG TTATTTTCCT TGGAAAKAGA CTGGGAGGCT TTGCCAGCTG ATGAACGACT 2040
 ACAGAAACGT CAAGAACATC TCCAGCCCCT AATGGAAGAC TTCTTTGCTT GGTGCCGCCG 2100
 TCAGTCAGTT TTAGCAGGTT CAAAACCTAGG AAGGGCAATT GAATACAGCC TCAAGTATGA 2160
 AGAAACCTTT AAGACTATTT TGAAAGACGG ACATCTGGTC CTTTCCAATA ATCTAGCTGA 2220
 ACGCGCCATT AAATCATTGG TTATGGGACG GAGTAAAAGA GTCCACTGGA CTCTTTTAGC 2280
 CTGAGCTCAG TTTAAAAAAG CGAGGGTGGT TATTTTCTCA AAGTTTGAA GGAGCTAAAG 2340
 CAAGAGCTAT TGTTATGAGC TTGTTGAAA CAGCTAAACG TCATCAATTA TAGTGC GTTG 2400
 AATCTATAAC AGTACGCATC GACTGCTAAA ACATTTCTAT AAATCAATTT TCCTTTCCTA 2460
 ATCGATTTGT TCATATCTTA TTTCAATCCA TTATAAATAG CGAGAAATAT CTATCCTATC 2520
 TTCTAGAATG TCTTCCAAAC GAGGAACTC TCGTAAACAA AGAGGTTTTA GAGCTTTATT 2580
 TACCATGGAC TAAAGTTGTA CAAGAAAAGT GCAAATAAGA AATCTCCAGA TTAGGAACTA 2640
 TCCGTGAGTT CACTAATCTG GAGATTTTTC AATAGATTCG TTATTGGGCG GTTACGATAT 2700
 GATCACTACT TCGTCAGTCT TATCTACAAC CTCAAAACAG TGTTTTGAGC AACCTGCGAC 2760
 TAGCTTCCTA GTTTACTCTT TGATTTTCAT TGAATATTAG AACAGAAAAA ATGCTTGGAG 2820
 TATTTGTTTG TGTGTTTATT TTTATATAAC AAATATAAA CAAAATAAAA ATATAAAAAA 2880
 AGAGACAAAA AAGAACAGAA AGTAATGAC A 2911

(2) INFORMATION FOR SEQ ID NO: 200:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6854 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

GAAAATAAGT CTTGACAGAA AGCGCTATCA ATGATAGAAT GAATTCAGAT AAAAAGATTT 60
 ATTTTAAAA CAAAATGAA ACGTTTCAAA AAAAGAAATA AAGAGACAGC GCCAAGCGCT 120
 ATCTTTCTA GAAAAAATG AAACGTTTCA AAAAAGGAGG TTGCTATGAA TAGCAAAGCG 180
 AAGCAAGTTT CTCTTTGGGA AAGAATCAAG AAACAAAAAC TCTTGTTATT GATGACTGTC 240
 CCCGGTTTAG TTTTAACCTT TATCTTAAA TACATCCCTA TGTATGGGGT TTTAATCGCA 300
 TTTAAAGATT ACAATCCTTT AAAAGGAATT TTAGGGAGTG ATTGGATTGG TTTTCTGAG 360

1176

TTTACAAAAT TCATATCCTC TCCCAACTTT GGTATCTTGT TAGCCAACAC ATTAAAAATTA	420
AGTATCTATG GTTTATGCT TGGCTTTTTC CCACCAATCA TTCTCGCGAT TATGCTCAAT	480
CAACTCTTGA GTGAAAAAGT CAAAAACGA ATTCAGCTCA TTTTATACGC ACCAAACTTT	540
ATCTCAGTCG TTGTTATTGT CGGTATGATT TTCCTCTTCT TTTCAGTGGG AGGACCAATC	600
AACAATTTTC TTTCTATGTT TGGAAATGAAG GCTGACTTCT TGACAAATCC AGACTTCTTT	660
AGACCTTTAT ACATCTTAG TGGTATCTGG CAAGGAATGG GCTGGGCTTC AACGCTCTAC	720
ACGGCAACAT TGGTAAATGT AGATCCAGCC TTAGTAGAAG CAGCCCGACT GGATGGAGCC	780
AATATCTTCC AACGAATCTG GCACATTGAT ATTCCAGCTC TTAAGCCTAT TATGGTTATC	840
CAATTTGTTT TAGCTGCAGG TGAATTATG AATGTCGGAT ATGAAAAAGC ATTCTTGATG	900
CAGACATCGT TAAATTTGCC AACTTCTGAA ATTATCTCGA CATATGTCTA TAAAGTTGGT	960
CTTGATCAG GAGACTATTC TTACTCAACA GCGGTTGGTT TGTTTAATGC AGTGATTAAC	1020
GTAGATTGTC TTGTTGCAGT TAACCAAATC GTTAAACGCA TGAATAATGG TGAAGGAATT	1080
TAAGGAGGAA AGTATGAAAA ATTCGATTAT GGATACAAAA TTTGATAGAC GTATCTTACT	1140
CTTAAATAAA ATCATTATTG TCTTTATCGT TTTGATGACT TTGCTTCCTT TACTTTATAT	1200
CGTCGTAGCA TCCTTTATGG ATCCTAAGGT TCTGGTTAGT AGAGGGATTA GCTTTAATCC	1260
AGCCGATTGG ACTGTAGAAG GTTACCAGCG TGTATTGAGT GACCAATCTA TTCTAAGAGG	1320
TTTTATCAAT TCTCTACTAT ACTCTTTTGG ATTTGCAGCT TTAACAGTCT TGCTATCTGT	1380
GTTTACAGCT TATCCTCTTT CTAAGAAAGA CTTGGTTGGA CGTCGTTGGA TTAACACTT	1440
CTTGATTGTA ACTATGTTCT TTGGTGGTGG TTTAGTCCCA ACTTACTTGC TCGTAAAAGA	1500
ATTGGGAATG CTCAATACTC CATGGGCTAT CATTGTTCCA GGTGCTGTTA ACGTTTGGAA	1560
TATFATTCTT GCTAGGGCCT ATTTCCAAGG ATTGCCTGAA GAATTAGTTG AAGCTGCTGT	1620
CATTGATGGT GCAAAATGATT TACAGATTTT CTTCAAAATC ATGCTTCCTC TTGCAAAACC	1680
AATTATGTTT GTTCTCTTCC TTTATGCTTT TGTAGGACAG TGGAATCAT ACTTTGATGC	1740
AATGATTTAT ATCAAGGATC CAACTTGGA ACCATTGCAA CTTGTACTTC GTAAAAATCT	1800
CATTGAGAGC CAACCAGGTC AAGACATGAT TGGAGCACAA GCGGCTATGA ATGAAATGAA	1860
ACGTTTAGCT GAATTGATTA AATACGCAAC TATTGTCATT TCCAGCTTGC CATTGATTGT	1920
TATGTATCCA TTCTTCCAAA AATACTTIGA TAAAGGAATT ATGGCTGGTT CACTTAAAGG	1980
ATAAAAAAAG AAAAAATAAA AGGAGTTTTC TCATGAAATT CAAAACATTC TCAAAATCAG	2040
CAGTTTTGTT GACAGCTAGT TTAGCAGTAC TTGCAGCCTG TGGCTCAAAA AATACAGCTT	2100
CAAGTCCAGA TTATAAGTTG GAAGGTGTAA CATTCCCCTC TCAAGAAAAG AAAACATTGA	2160

1177

AGTTTATGAC AGCCAGTTCA CCGTTATCTC CTAAAGACCC AAATGAAAAG TTAATTTTGC	2220
AACGTTTGGA GAAGGAACT GCGGTTTCATA TTGACTGGAC CAACTACCAA TCCGACTTTG	2280
CAGAAAAACG TAACTTGGAT ATTTCTAGTG GTGATTTACC AGATGCTATC CACAACGACG	2340
GAGCTTCAGA TGTGGACTTG ATGAAGTGGG CTAAAAAAGG TGTATTATT CCAGTTGAAC	2400
ATTTGATTGA TAAATACATG CCAAATCTTA AGAAAATTTT GGATGAGAAA CCAGAGTACA	2460
AGGCCTTGAT GACAGCACCT GATGGGCACA TTTACTCATT TCCATGGATT GAAGAGCTTG	2520
GAGATGGTAA AGAGTCTATT CACAGTGTCA ACGATATGGC TTGGATTAAAC AAAGATTGGC	2580
TTAAGAAACT TGGTCTTGAA ATGCCAAAA CTACTGATGA TTTGATTAAA GTCCTAGAAG	2640
CTTTCAAAA CGGGGATCCA AATGGAAATG GAGAGGCTGA TGAAATCCA TTTCATTTA	2700
TTAGTGGTAA CGGAAACGAA GATTTTAAAT TCCTATTTGC TGCATTTGGT ATAGGGGATA	2760
ACGATGATCA TTTAGTAGTA GGAAATGATG GCAAAGTTGA CTTTACAGCA GATAACGATA	2820
ACTATAAAGA AGGTGTCAA TTTATCCGTC AATTGCAAGA AAAAGGCCTG ATTGATAAAG	2880
AAGCTTTCGA ACATGATTGG AATAGTTACA TTGCTAAAGG TCATGATCAG AAATTTGGTG	2940
TTTACTTTAC ATGGGATAAG AATAATGTTA CTGGAAGTAA CGAAAGTTAT GATGTTTAC	3000
CAGTACTTGC TGGACCAAGT GGTCAAAAAC ACGTAGCTCG TACAAACGGT ATGGGATTTG	3060
CACGTGACAA GATGGTTATT ACCAGTGTA AAAAAACCT AGAATTGACA GCTAAATGGA	3120
TTGATGCACA ATACGCTCCA CTCCAATCTG TGCAAAATAA CTGGGGAACT TACGGAGATG	3180
ACAAACAACA AAACATCTTT GAATTGGATC AAGCGTCAA TAGTCTAAAA CACTTACCAC	3240
TAAACGGAAC TGCACCAGCA GAACCTCGTC AAAAGACTGA AGTAGGAGGA CCACTAGCTA	3300
TCCTAGATTC ATACTATGGT AAAGTAACAA CCATGCCTGA TGATGCCAAA TGGCGTTTGG	3360
ATCTTATCAA AGAATATTAT GTTCCTTACA TGAGCAATGT CAATAACTAT CCAAGAGTCT	3420
TTATGACACA GGAAGATTTG GACAAGATTG CCCATATCGA AGCAGATATG AATGACTATA	3480
TCTACCGTAA ACGTGCTGAA TGGATTGTAA ATGGCAATAT TGATACTGAG TGGGATGATT	3540
ACAAGAAAGA ACTTGAAAA TACGGACTTT CTGATTACCT CGCTATTAAA CAAAAATACT	3600
ACGACCAATA CCAAGCAAAC AAAAAGTAGA GGTGATTAT GGGAGATAAG AAATACACAG	3660
TAGAAAAAGC CAATCGTTTT ATAGCAGAAA ATAAACATCT CGTTAATACT CAATATAAGC	3720
CTGAAGAACA TTTTTCAGCT GAGATTGGTT GGATCAATGA TCCAAATGGA TTTGTCTATT	3780
TTCGTGGAGA ATACCATCTC TTTTATCAAT TCTATCCATA TGATAGTGTT TGGGGGCCTA	3840
TGCACTGGGG ACATGCTAAA AGTAAGGACT TGGTGACTTG GGAGCACTTG CCAGTGGCAC	3900

1178

TTGCTCCTGA CCAAGATTAT GACCGAAATG GTTGTTCCTC AGGCTCTGCC ATTGTCAAGG	3960
ATGATCGCCT CTGGCTCATG TACACTGGAC ATATCGAAGA AGAAACCGGT CTCCGCCAAG	4020
TGCAAAATAT GGTATTTTCA GATGACGGGA TTCACCTTGA AAAGATTTC CAAAATCCAG	4080
TTGCAACTGG ATCAGACTTA CCAGATGAGT TGATTGCTGC TGATTTCCTG GATCCAAAAC	4140
TCTTTGAAAA AGATGGACGC TATTACTCCG TAGTAGCTGC CAAACACAAG GATAATGTGG	4200
GCTGTATCGT TCTACTAGGG TCCGATAACC TAGTAGAATG GCAGTTCGAA TCCATCTTTT	4260
TAAAAGGGGG AGAACACCAA GGTTTTATGT GGGAATGCCC AGATTACTTC GAGTTAGATG	4320
GGAAAGATTG CCTTATTATG TCACCCATGC GTTATCAGCG TGAGGGAGAC TCATATCATA	4380
ACATCAACTC ATCGCTTTTG TTCACGGGTA AGGTAGATTG GAGAGAAAAA CGTTTTATCC	4440
CAGAAATCAGT TCAAGAAATT GATCATGGCC AAGACTTCTA TGCGCCTCAA ACATTGTTGG	4500
ACGATCAAAA TCGTCGTATC CTGATTGCTT GGATGCAGAC ATGGGGGCGT ACCCTTCCAA	4560
CCCATGACCA AGAACACAAG TGGGCATGTG CCATGACTCT ACCTAGAATT CTAAGATTGG	4620
AAGATGGCAA ACTAAGACAA TTCCCTGTTA AAAAAGGCCA ATATCAAATC CAAATAGATA	4680
AAGATTGTCA TTACCACTTA GGAAATGATA TAGATTATCT TGAATTTGGT TATGACAGTA	4740
ATGCGCAGCA AGTTTACATT GATCGTAGCC ATCTTATTCA AAAAATTCTA GGTGAAGAAG	4800
AACAGGACAC TAGTCGACGG TATGTAGATA TTGAAGCTAA AGAATTGGAA GTTGTTCIAG	4860
ATAAAAAATC CATCGAGATT TTTGTCAATC AAGGTGAAGC AAGCTTGACT GCAACTTATT	4920
ACTTAACGGT GCCAGCTGAG CTATCACGAA TTGATTAAAA ATTAAGTTAT TTCTCCTAAA	4980
GAAAAAGTTC TCTTTCTAAA ATAGTGGAAG GAGGACTTTT TGTGTTTGG GTATATAAGC	5040
TTAGTTTATG GTATTTGTAA AATTGGTGTT CGATTATGAT TTAAGCTAGT TTTCTAAAGA	5100
ATTTGAAAAA AATTTTATTT AAGCAAAAAA ACCTTGGTTC CAAGGCTTTT CCTGTTGTAT	5160
TTAGATGCCC CCTACAGGGA TTGTAGGAGA TATGTTGCTT AGATGTTCTT GATTTTCTGG	5220
TGTTTGTAA CGTTTAAATG AGTTTTTTGA GTTTGTTGGT GGGGCGTTGC CCGCAATTG	5280
CCCGACTTAT TGCTTGAAAA AGAATTTAAA ATATAGTATA GTTAATTATA GATTAACACT	5340
TGCTTGAGAG AACTGATGAA GAACAATGAA AGATTAGGTA TTAAATTAAG TAGAGATAGC	5400
GTTTITAGGAT TGAGGGAAGT TAGAAGGCTT TATTTAGGCA GTTCAGATAT CCCAGTTTCT	5460
GATGGCTATG TGATTGAAGT TGCTTATAAC CAGATATCAC ATGAGATTGA TATTATTGAT	5520
TGGGTAGAGT TGAACAAGTC AAAAATTAAG ATAAGTGAAA TTAGTGAAAG CGTGGATATA	5580
GATGCCACTA GCTTGAGAAC AACTTTGACT TTAGACACAT TAGTATATGA AGGTATGAGA	5640
GATATACAGT TAAAGTTGAG AGAGCTTACA AAGGGGAGAG TATTCTTTTC ATTTGTAGTG	5700

1179

AAGTTAGTTT TGTTCGCTTC TATTTTAAAG AAAAAAGATT TACTAGAAAA ATTCAAGAA 5760
 AAGTCTTAAT CAAGTATTGA CACTTTATCT GGATTTCGGT ATAATATGCT TAGAAAGGAA 5820
 TCTTCTCTAA TTTTTCGCT CCTTATGTGT TAATCAAAGA CGAATACAAA AACATATTTT 5880
 TTTACTCTAA AAAGTGTTAA TCAATGATGT ATTTGTTAGA GAGGTAGATA AATGGAATTG 5940
 AGAGCACCAC CAGTTATAAT AGTATAAAC GTATAATAAA AATATTTTAA CTGGAATTAT 6000
 AGAAAAGGAG AAACAAATCA TGAAACAAAA ACAACCGATT GTTCTAGAA CGAAACAACA 6060
 TACATTTGAA GAGCTTATTC AAGACCAAAA GTTAGAAAGA TTGGCTAAGT TGTCGCCCGA 6120
 TTTGGTTGGA AGGTATGGTT TTACTGCTAG CTGTGCGTCT TCATTTGCCA ACTTGATTAA 6180
 AGAAGCGTAT GGGGGTAAAA ATCTAAACGT AGTTTATGCG AGTCGGATGT TGGCTCTCTG 6240
 GAATATTGCT TGCAGTTGTT ATCATAAGGC TGATGGGTAT TCTTTAGCAG ATGCGCTTTT 6300
 TAGTGATAAA AAAATTGTC TAGATTCTTA CTATTACCAC AAGAATACCT CTAATACCAT 6360
 AACTAGTGAT GTGATAAAG ATGTTTACGA TAATTATAAT AATTATATGG TTTTAACTCG 6420
 AGAAGCGACA CCTGAATACA TTTATGTGT ACAAACGTAA ATGCCAAAAG ATTCAGATTT 6480
 ATATTTTAT ATTAGAGAAG TTCTGGGATT ATCGTTTAGT ACCATGCATT ATGCATTTTT 6540
 AGTCAAGGTT CTTGCAGGAG CGCTTGCTAG AAAATATAAG CCATATCGAA ATTGAATTAT 6600
 TTAAATTAT ACTCTTCGAA AATCAAATTC AAACCAAGTC AGCTTCGCCT TGCTGTAATC 6660
 AAGTGCTGTC TGTGGCTAGC TTCTTAGTTT GCTTTTGGAT TTTATTGAG TATTACTCTT 6720
 ATGGTAGTTA TTTATGGCAT AATAATATTG ATTTGGGAGT TATAGCGAAA ATTTTAGGTT 6780
 CTATAATATT TGTAGTGGT AAACCACTAT AGATATTATG GAGCCTATTT ATTGTAGAAA 6840
 AAAGTCCCAT ATGA 6854

(2) INFORMATION FOR SEQ ID NO: 201:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3895 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

TCCTTGCTAA GTTTATACTC AATGAAAATC AAAGAACAAA CTAGGAAGCT AGCCACAGGT 60
 TGCTCAAAGC ACCGCTTTGA GGTTCAGAT AAAACTGACA CGGTTTGAAG AGATTTTCGA 120
 AGAGTATTAA TTTACATAAA TAGCCAGTGT TTGATAGGCT TTGAGTAGAA TTTTCTCAGA 180

1180

CACTTCTGCA TCTTCATAGT TTGATATCAA AATCTGTCCA TTTTGGTAGA CTGCTGGCAA	240
GTCGATTTcA CTTCCTTAGC ATAAAAGTTA TTGAGCACTA GTAACCTTTG ATCCTCAAAC	300
TGGCGTTCAA AAGCGTAGAC TTGTTTGCTA TCTTCAAAGG CTGGTTTGTA ACTTCCTTCT	360
GAAATGATTG GCATTTCCCTT ACGCATCGAA TCAAGTCTTG ATAGAAGGTA AAAATCGGAC	420
CCTGGATTTC ATTTTCTACA TTGATGTATT TATAGGATTT ACCAGCTTTC AACCAAGGAG	480
TGCTGTGTTGA AAATCCTGCA TTTTCCGAAG CATCCCCTG CATGGGAATG CGTGAATTAT	540
CACGCGACTT AGCTTGAATA ATCTGGAAGG CTTCTTGCTG ACTCTTTCCT TCTTCTAAGA	600
GCATCTGATA GGCATTAAGC GATTCGACAT CCACATAATC AGCCATAGAA TCATAGTCTG	660
GGTCAATCAT CCCGATTTCC TCACCCATGT AGATATAAGG TGTCCCACGT GACAGGTGAA	720
TGCTGGCTGC TAGCATGGTG GCTCCTTCCT TGCAGAAGTT TTGAATATCG ACAAACGGT	780
TCAAGGCACG TGGTTGATCG TGATTATTC AAAAGAGGGC ACTCCAACCG TCTTTATCAC	840
TCATTTCTTT ACCCCAATA TGTAAGAC TCTTCAACTC TTCAAATCA AAGGGAGCCA	900
AGGTCCACTT TTGTCCATCC TTATAGTCCA CCTTGAGGTG ATGAAAATTA AAGGTCATGG	960
ATAATTCCTG ACGATCAGGC GACGAATAGA GGACACAGTT TTCCATGGTG GTAGAAGACA	1020
TTTCCCCAAC TGTCTATAAG CTATCGTCGG ATCCAAAAGT GGCTTGGTTC ATCATACGCA	1080
AATAGTTATG AACGATGGGT TTGTCTGTAT AAGCTGGCTT CCCTTCATTT TCAGGACAGT	1140
CCACTGAAAC CTCGTCCTTA CCGATCAAAT TGATCACATC AAATCGGAAA CCTTTGACAC	1200
CCTTGTCGCG CCAGAAATTA ACAACCTGA AAAGCTCCTT ACGGACATTG GAATTGCGCC	1260
AGTTAAGGTC AGCCTGGGTC TCATCAAATA GGTGAAGATA GTATTTCCTA GTATCCCCGA	1320
AAGGCGTCCA TGCAGAACCA CCAAACCTAG ACTGCCAATC TGTGGTTGG TCTTGGATGA	1380
AGAAAAAGTC TTGATAATAC TTATCACCAG CTAGGGCTTT CTGAAACCAT TCATGCTCTG	1440
TCGAACAATG ATTAAGTACC ATGTCCAGCA TAAAGTCAAT CTTGTGCTCT TTACCGACAC	1500
ACACCATTTT CTCAAAATCA GCCATATCAC CAAAAGAGG ATCCACTGCC ATATAATCTG	1560
AAATATCGTA ACCATTATCC CGTTGAGGGC TTGGATAGAA TGGATTGAGC CAGACCATAT	1620
CCACACCTAG TTTGGCTAAA TAGGGAATTT TTTCGATAAT CCCACGAAA TCCCCAATAC	1680
CGTTTTCAGT GGTGTCTTTG TAAGATTTTG GATAGATTG ATAGACTACT TTTCTTTTAT	1740
CAAGTGTCAT CTGTTCTCTC TTTTCTGATA AAAGGGAGGA AGCAGTCTTC CGTCCCTATT	1800
TGTGCTATTT CAATTATACT CAATGAAAAT CAAAGAACAA ACTAGGAAGC TAGCCACAGG	1860
TTGCTCAAAA CACTATTTTG AGGTTGCAGA TAGAGCTGAC GTGGTTTGAA GAGATTTTCC	1920
AAGACTATTA GATTCGTGA GCGACCATGA GAGATGCTCC AGCTTGGATC GTTGTGGAT	1980

1181

AAGTTCCGGG AATAGTCGCT GTATAAGCAT CTGGTTGGT GATGATAACA GGAGTTTCTG	2040
TCACCAGACC TGCAGCCTTA ATGACATCCA TATCAAAACG AATCAGTTGC TGACCAACTG	2100
TAACGTGATC TCCTTGGACT ACAAGACTTT CAAAACCTTT GCCATCAAGA CCTACTGTAT	2160
CCATACCGAT GTGGATGAGC AATTCAACTC CCTCGTCAGA GACAATGCCG ATGGCATGCT	2220
TGGTAGGGAA AAGAACCGTC ACTGTCCCAT TAACTGGAGA GGTCAACTCA CCTTGGCTTG	2280
GTTCAATGAC TAGACCTTGC CCCATGACAC CTGATGCAAA AATAGGATCC GTCGCTTGAC	2340
TCAATTCTTT CACTTGGCCA GTTAGTGGGC TGATAATTC TACCGAAGTA AGTTCTACTG	2400
GTTCATGGTT CACAAATTCT GCTTCTTCTT GAGCAACGAA TTCTGCCTGC AAGTTCGTAT	2460
CGCCCTCTGT TTTGTAAAG AGACCAGCCT TCGGAAGAA GAAAGTCAAG AGCATTGGAA	2520
CAACAATCGC AACTAGCATA GTTCTGCAA ATGGCAGCAT GTATTGAGGT TGAATAGAGA	2580
GAATACCTGG CAAACCACCG ATACCAATAG AAGCCGCAGT TACATTAAAA GTAACGGATA	2640
ACATGCCTGC AAGGGCTGAA CCAGTCATCC CAGCAACAAA TGGATAAATA TATTTTACGT	2700
TAACCCCAA AAGAGCTGGT TCTGTAACAC CGAGATAGGC TGAAATGGT GCAGGAAGTG	2760
AAACCTGAGC CTCACGCTCA TCATGGCGAT GCATGAAATA ATAGGCAAAC ACGGCTGAGC	2820
CTTGAGCAAT ATTAGAAAGA GCAATCATTG GCCATAGGGC AGTGCCACCA GCATCCGCAA	2880
TCAATTGTGT ATCAATGGCA TTGGTCATAT GGTGCAGACC TGTGATGACA AATGGAGCGT	2940
AGAGGGCGCC AAAAAATGCA CCGAAGAGCC ATTTAACTGG ACCAGTTAA CCTGCCAAGA	3000
CAACTGATGA AAGTCCTGT CCAATTGTCC AACCGATTGG TCCCAAAACA GTATGAGCCA	3060
AAATCAAGGC TGAATCAAT GACAAGAAAG GTACAAAAAT CATAGAAATG ACTTCTGGGA	3120
TATGCTTGTG CCAGAAGATT TCAAGATAAG ACAGACTCAA ACCTGCAAGC AAGGCTGGGA	3180
TAACCTGGGC TTGGTAACCG ATACGATTAA CAGTAAAATA GCCAAAATTC CAAACCCAGT	3240
TTGCCGCGAT ATCAGCTGCT GCGGTGAAG CAACCGCATA GGCATTGAGC AACTGAGGCG	3300
ATACCAACA GATTCGAGA ACAATTCCCA AAATTGGCT GGTCCCATC TTACGAGAAA	3360
CAGACCAAGT AATCCCTACT GGTAAAGACT GGAAGATAGC TTCACCAGGC AACCAGAGGA	3420
AGTGATTGAC ACCTGCCCAA AACTGAGAGG ATTCTGTGAT GGTCTTGCCA TCCAACATCG	3480
ACCAATGGAC ACCTTCCAAG ACATTACGGA AACCGAGGAT CAATCCTCCG ACTATCAAGG	3540
CTGGAATAAT CGGAGTAAAA ATCTCCGCCA GAGTGGTCAT AACACCTTG ACCACGTTTT	3600
GATTACTCTT AGCTGCAGAC TTGGCTGCTT CTTTGAAAC ACCCTCAATA CCTGAAACGG	3660
CTGTAAATC ATTATAAAG ATGGGCACGT CATTTCCAAT GATTACCTGA AATTGACCTG	3720

1182

CATTGTGAAA GGTTCCTTTA ACAGCTGGAA TTGACTCGAT AGCTTTAACA TTAGCCTTCT	3780
TATCATCTCC TAAACAAAC CGCATCCGTG TCGCACAGTG AGTTACGGCA GTCACATTTT	3840
CTTTGCCTCC GATTGCCTGA AGCAGATCTT TGGCTTCTTG TTCAAATTTT CCCGG	3895

(2) INFORMATION FOR SEQ ID NO: 202:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3936 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

AGGATCGCCG CTCCAGCTAC TAAGTCTCGT GCAGTGCCGA TTTATCAAAC AACATTTTTT	60
GTTTTTGATG ACACGTAGGA AGGTGCCGAT CTGTTTGCTT TGAGGAAACC AGGGAACATT	120
TATACTCGTA TCACCAATCC TACAACAGCT GCCCTTGAAG GTGGTGTGTA AGCGCTAgcA	180
ACAGCATCAG GTATGACTGC AGTGACTTAT ACGATTTTGG CGATTGCCCA TGCTGGTGAC	240
CATGTAGTGG CTGCTTCGAC TATTTACGGT GGAACCTTCA ATCTTTTGAA AGAACCCCTT	300
CCTCGTTATG GTATCACAAC AACCTTTTTC GATATTGATA ATTTGGAGGA AGTAGAAGCA	360
GCTATCAAAG ACAATACCAA GCTTGTCTTG ATTGAAACCT TGGGTAACCC CTTGATTAAT	420
ATTCCAGACC TGGAAAACT GGCAGAGATT GCTCATAAAC ATCAAATCCC ACTTGTGTCA	480
GACAATACTT TTGCAACACC TTATTTGATT AACGTCTTCT CTCATGGCGT TGACATTGCC	540
ATTCACTCTG TGACTAAGTT TATCGGTGGG CATGGTACAA CTATTGGAGG AATAATTGTC	600
GATAGTGGTC GTTTTGA CTGACGCTTCA GGGAAATTC CTCAATTTGT TGACGAGGGT	660
CCAAGCTGCC ACAATTTGAG CTATACTCGT GATGTGGGTG CAGCAGCCTT TATTATAGCT	720
GTTTCGAGTC AATTGCTTCG TGATACAGGT GCAGCCTTGT CACCATTCAA TCCTTTCCTC	780
TTGCTACAAA GACTTGAAAC CTCTTCACTT CGTGTGGAAC GCCATGTACA AAATGCTGAG	840
ACAATTGTTG ATTTTCTTGT CAACCATCCT AAGGTAGAAA AGGTAAATTA TCCAAAACCT	900
GCAGATAGTC CTTATCATGC CTTGGCTGAG AAATACTTGC CAAAAGGTGT CGGTTCAATC	960
TTTACCTTCC ACGTCAAAGG TGGCGAGGAA GAAGCAGCA AGGTCAATTGA TAA'TTTAGAA	1020
ATCTTTTCTG ACCTTGCAAA CGCGGCAGAT GCTAAATCGC TTGTTGTCCA TCCAGCAACA	1080
ACCACTCAGG GTCAATTGTC AGAAAAAGAC CTAGAAGCAG CAGGTGTCAC ACCAAACTAA	1140
ATTGCTTTGT CAATCGGTCT TGAAAAATGTA GAAGATTGA TTGAAGACTT GCGCTTGGCC	1200
TTGGAAGAAA TTAAAGTAA AAGAAGATAA ACAGTGGGCT TCGACTCACT GTTTTGTGATT	1260

1183

TTCCCTCAGG CATGATATAA TGGTTACAGA AGTCTAGAAA GAGGAACGAT ATGAACGAAA	1320
TCAAATGTCC CAACTGTGGG GAAGTCTTTA CAGTAAATGA GAGTCAGTAT GCCGAACCTCT	1380
TGTCCCAAGT GAGAACGGCA GAGTTTGATA AGGAACACATA CGATAGGATG AAGCAGGAAC	1440
TGGCCTTGGC TGAGCAAAAG GCCATGAATG AGCAACAGAC TAAACTGGCT CAGAAGGATC	1500
AAGAAATTGC GCAATTACAG AGTCAGATCC AAAACTTTGA TACAGAAAAA GAATTGGCCA	1560
AGAAAGAGCT TGAACAGACA AGCCATGAGG CTCTCTTGGC TAAGGACAAG GAAGTACAGC	1620
TCTTAGAAAA TCAGTTGGCT ACCTTGCGTT TGGAGCATGA AAATCAACTA CAAAAGACCC	1680
TTTCTGACCT AGAAAAAGAA CGGGATCAGG TTA AAAACCA ACTACTTTTG CAGGAAAAGG	1740
AAAATGAATT ATCTTTGGCT TCTGTTAAGC AAAACTACGA AGCCAGCTC AAGGCAGCTA	1800
GTGAACAAGT CGAGTTTAT AAGAATTTTA AGGCTCAACA ATCTACAAAA GCGATTGGGG	1860
AAAGCCTAGA ACAGTATGCA GAGAGTGAGT TTAACAAGGT TCGTAGTTTC GCCTTTCCAA	1920
ATGCTTACTT TGAGAAGGAT AACAAGGTCT CTTCGCGTGG GTCTAAAGGG GACTTTATCT	1980
TCCGTGAGTG TGATGAAAAT GGAGTTGAAA TCATTTCTAT CATGTTTGAG ATGAAAAACG	2040
AAGCGGACGG AACAGAGAAG AAGCACAAGA ATGCAGATTT TTACAAGGAA TTGGACAAGG	2100
ACCGTCGGGA GAAGAACTGT GAGTATGCCG TTTTGGTGAC CATGCTTGAG GCTGATAATG	2160
ACTACTTTAA CACAGGGATT GTTGACGTCA GTCACGAGTA TGAAAAAATG TATGTTGTTT	2220
GTCTCAATT CTTTATCCAA TTGATTGGTC TCTTACGTAA TGCGGCGCTA AATCCCTAA	2280
AATACAAGCA GGAGTTGGCC TTGGTTCGCG AGCAAAATAT TGACATTACG CATTTTGAGG	2340
AAGATTTGGA TGCCTTTAAG CTAGCTTTTG CTAAGAACTA TAATTCAGCT TCGACTAACT	2400
TTGGAAAAGC TATTGATGAA ATCGACAAGG CCATCAAACG CATGGAAGAG GTTAAGAAAT	2460
TCCTGACCAC ATCTGAAAAC CAACTCCGTT TAGCTAACAA CAAATTGGAA GATGTCTCTG	2520
TTAAAAAATT GACCCGAAA AATCCAACAA TGAAAGCGAA GTTCGAAGCA CTGAAGGGGG	2580
AGTAGAAAGC AAAAATGAAC GGTATTATTA ACTTAAAAA GGAAGCAGGA ATGACCTCGC	2640
ATGATGCGGT TTTTAACTG CGTAAGATTT TGGGAACCAA GAAAATTGGT CATGGTGGA	2700
CCTTGATCC GGATGTGGTG GGTGTTTTGC CGATTGCGGT TGGCAAGGCG ACACGCATGC	2760
TCGAGTTTAT GCAGACGAG GCTAAGATCT ATGAGGGGGA AATCACTCTG GGCTATTCCA	2820
CGAAGACTGA GGATGCTAGT GGGGAAGTGG TCGCAGAAAC CCCTGTTTTG TCTCTCTTG	2880
ATGAAAAGCT TGTTGATGAA GCGATTGCTA GCTTGACTGG GCCTATTACT CAGATTCCCC	2940
CTATGTATTC GGCAGTTAAG GTTAATGGTC GCAAGCTCTA TGAGTATGCG CGTGCTGGTC	3000

1184

AGGAAGTGGA GCGTCCAGAA CGTCAGGTGA CCATTTATCA ATTTGAGCGA ACAAGTCCGA	3060
TTTCTTATGA TGGCCAACTT GCCCGATTCA CTTTTCGTGT AAAATGCAGT AAAGGGACGT	3120
ACATCCGTAC TTTGTCACTT GATTTGGGTG AAAAGCTTGG TTATGCGGCT CATATGTCCC	3180
ATTTGACTCG TACTAGTGCT GCTGGCTTAC AATTAGAAGA CGCTCTTGCC TTGGAGGAAA	3240
TTGCTGAAAA AGTAGAGGCT GGGCAATTAG ATTTTCTCCA TCCTTTAGAG ATTGGGACAG	3300
CTGACCTTGT CAAAGTTTTC CTAAGTCCAG AAGAGGCTAC AGAAGTTCGC TTGGTTCGTT	3360
TTATTGAGCT AGACCAAACG GACAAAGAAC TGGCTGCCTT TGAAGATGAT AAATTGTTAG	3420
CCATTCTAGA AAAACGGGGC AATCTCTATA AGCCAAGGAA GGTTTTTAGC TAGATCGTTT	3480
AGGAATAAAA ATCGGGTGAT AGATAACAAT TGCTTGATAA AACCCCATAC TAATAGTAGA	3540
ATGGTTTGG GAATTATAAT ATTCCAATTG TTGCGAGTTG TAGGTACTCA AATAATCTAT	3600
ATAGAAATTT AGAGGTGTGA AATGAAGCAA TTTAAAATTC TTTCAGATAA ATATTTAGAG	3660
TCCATTACAG GTTCTGATGG GAACTTAGGC CCAGGATTTG GTGTGATAAT TCCATGATGC	3720
GAAATGAGTT TCGAGAAAGG GTGGAGCAAC TTCTTCAACA AAAAGAAATA AATGAAAATA	3780
GTGAGTTGAG TCACCTGTTT CGTCTTGCTA TACAAAATTT AGACAGAAAT GAAAAATACC	3840
AAATCGGTCAT GGCCAATTG AGTCAAGGGT TGTCACTTTA CCTCATGACG CATCATTACC	3900
AGGCACCTAA GTCTGTCATT GATTTTGGTT TATGGA	3936

(2) INFORMATION FOR SEQ ID NO: 203:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3230 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

CATCCAGCAA CTGCTCCTCT GAGCGTTTCA AAATTGATGT AATTTTCTA GTTTTTTCTA	60
ATAAATGTGC CATTTTTCAC CTCGAATTGA ATCGCTATCA TTATAACATA AAAACGTCTC	120
TTTTTCAATA ATTATCTGAA AATTCCTTAT TGACTTGCAAT TGACTTACAA TTTAATTAAA	180
AACCAGAATA TTTTAAATTA AATTGTTTCT TTTCTATTGA CAAGTTGCCT ATTTTGTGT	240
ATCATAATAT TATAAAAGAT AATATAATAA TTTTATTTGT CTTTTCACAT TCGGTCTCCT	300
TATATAAAAA AGCGATTCAT TTTGAACCGC TTTTCTTAT TTATCGCCTT TGTTACGAAT	360
AACAAAGCCT GTTTGCTTTT CGCTTAAAGT ATTGCGTGGT TTTTATTAT CTTTACGGTA	420
ACGTTTTTCC TTATCAAAAC GATCGTTGCC ACGACTTCCT TTTTGAACAT CATCACGGCG	480

1185

ACCATTGCCA CGGCGATCAC GCTCTCGACG GTCGTCCCCA CGACGGCCTC CACGACCTCC	540
CTTAGCTTTA CCACCGAAAC CATTACCTGA TGGTTTAAAC GGTAGTGGCT TTTACGTGC	600
AATCTCCACT TCTGGAAGGC TATCTGGGTC TTGGACTGTC AGACTCAAGA TATACATTGC	660
CAATTCTTCT GGAGTAAACT CAGCAGCCAA TTTGCGAGCA TCCTTACCAA ATTTCTCAA	720
GTTGGCACGA ATGGTTTCAT CTGCAAAATC ACGTTCGATT TTCTTGAGAG CTACCTGTTT	780
TTTGTATTGG AAGGATTCTT CTACACTTGC AGGTTTGAGA CCTTTCATGC GTTCTTAGT	840
CAAGTTTTC AATGATTGAA GGTAACCCAT TTCGTTTGA GCAACAAAAG TAATAGATTG	900
ACCTGACTTA CCAGCACGAC CTGTACGACC GATACGGTGA ACATAACTCT CAGGATCTTG	960
TGGAATATCG TAGTTGTAGA CATGGGTCAC ACCTGAAATA TCCAAACCAC GCGCTGCAAC	1020
GTCTGTCGCA ACCAAAACAT CAAGATTGCC ATTTTAAAG TCACGAAGGA CACGAAGACG	1080
TTTGTTTTGG TCTAGGTCGC CATGAATTCC TTCTGCACGG AAGCCACGAA TTTTCAAACC	1140
ACGAGTCAAT TCATCCACAC GCGGTTTGGT ACGACCAAAT ACAATAGCGA GTTCTGGTTG	1200
TGCCACATCC ATGAGACGAG TCATGGTGTC AAATTTTCT TGTTCCTTAA CACGGATATA	1260
GTA CTGGTCA ACCAATTCTG TTGTCAATTC CTTAGCCGCA ATCTTGACAT GTTCAGGGGC	1320
TTTCATAAAC TGAACACCGA TACGTTTGAT GGCATCTGGC ATAGTTGCTG AGAAAAGCAA	1380
AGTTTGACGG TTCTCAGGTA CACGGGAAAT AATGGCTTCG ATGTCTTCAA GGAAGCCCAT	1440
GTTAAGCATT TCATCCGCTT CGTCAAGGAT AAGGGTTTCA ATGTCTTGTA ATTTCAAGGC	1500
CTTGCGTTTA ATCAAGTCCA AGAGGCGACC TGGAGTCCC ACCACAATAT GGGCACCAGA	1560
TTTAAGAGCC TTAATTGTT TTCAATGCT TGATCCGCCA TATACTGAAC GGA CTTTGAC	1620
TCCCTTACTA CGACCAAAGC GGAAGAGTTC TTCTTGACTT TGGACAGCTA GTTCACGAGT	1680
TGGAGCGATG ACCAAGGCTT GGATAGTCGC TTCTTCTGTA CGGATTTTTT CAAGGGTAGG	1740
CAAGCCAAAG GCTGCAGTTT TTCCTGTACC AGTCTGAGCT TGACCGATAA CATCCTTGCC	1800
TTCAAGGGCC AAAGGAATAG TTTGTTCTTG GATAGGACTA GCTTCTACAA AACCAGCTTT	1860
TTCAATTCTT GCTAGCAAAT CAGCAGACAA GTTTAATTCA TTAAATTCA CGTTATTCTT	1920
CTTCTTAAAG GTGGTGCGAA GCCACCCTAT AGGGCTTAGT TTATACTTTT CTTTTATGA	1980
CGTATTTTCA TATAACTAGA TATAAAATCG TGTTGCTTCT TTTCCACAAA AGAAAAGTAC	2040
TGTTTTCTTT GCAACCTATC TAGTATAACA CAAGACCAGA GCAAAAGATA GCCCCATTTC	2100
TACAGAAAT CATGTAAGCG CTTTTGACT TTCTTTTTTG ATTGAACGAC CTAGATAATA	2160
AGACAAAGCC AAGGCGATAC TGTATAAAAT GAGAAAAACG AACAAGGTTT GTGTGTACGA	2220

1186

ATGAGCCATT TTATAAGTCT CTGCTAATAA AATAGGTCCC GCTAAACCAG CCATTGCCCA	2280
AGCTGTTAAA ATATAACCAT GCAGAGCGGC CAATTCCTTG GTTCCAAAAA TATCACTGAG	2340
ATAAGCTGGA ATCAAAGAAA AACCAGCTCC ATAGCAAGTC ATCAAATAG ACATAGCAAC	2400
TACAAATAAA ACGGAATCTG TAAAGAGCCA AAGTGAGAGA GAAAAGAAAA GATTGACAAG	2460
CAGTAATATA CTAAAGGTTA GAGGGCGACC GATATAGTCA GACAAACTCG CCCAGAGCAA	2520
GCGACCAAAT CCATTGAAAA TCCCCAAAAC ACCCACCATT ACTGCTGCAT GACTTGTAGA	2580
CAAGCCAGCC ATCTCCTGTG CCATTGGCGA TGCCGCTGAA ATTAAGCCTA AACCACAAGC	2640
TATGTTGATA AAGAAAATAA TCCAAAGCAT ATAAAACCGA TTGCTTTTTA GAGCCTGATT	2700
TGCAGCCATT CCTTGCCTCA AAGAGGCTGT TTTTCTTTC CCTGAAGAAG ATAAAATTGC	2760
AAGCTCTTGC TCATTGAGAC GCTTAATGAA TTGTGAAGCT AGGAGCATGA TAATAAAGTA	2820
ACTTGCTCCT AAAATATAAA AAGTTTCTAC AAGCCCTACC CCTGCGATGA GGTGTTGCGC	2880
TATGGGACTA GTCAATAAAG AAGCAAAACC AAACCCATA ATCGCTAAAC CTGTTGCGAG	2940
ACCACGTTTA TCAGGAAACC ATTTTATAAT CGTCGACACA GGGGTAATAT AGCCTGCTCC	3000
CAAACCAAGC CCACCTAAAA TGCCATAAGC GAGATACAAC AACCACAGCT CTGACGCTCT	3060
ATTGCAATC CTGTTAAGAT ATTTCCACCT GCGTATAGAA AAGCAGATAG ACTTCCCATG	3120
ACTTTCGGAC CAAATTTTTC TACCAACGC CCCATAAATG CAGCCGATAA GCCCAAACAA	3180
AAGATTGCTA GACTAAAGCC GAAGGCAACA GAAGCCTGAT CCCATCCCGT	3230

(2) INFORMATION FOR SEQ ID NO: 204:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5096 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

CCTATGAAGA CTGTCCCAAC TGGGTGTCCT TCTAGGCTAT CTGGTCCTGC CACTCCAGTC	60
AAACTAATTC CAAAATCAGA CTGGGTCTTG CTTCGTGCCT GCTCAGCCAT CTTCTGAGCT	120
GTAATTCAG ACACCACACC ATGTTCTTCC AAATTCCTGG CAGGAATATC CAACATCCTT	180
GATTTTTCCT CCAAGCTATA GGTACAAAA CCACCCTTAA ATATACTTGA AACTCCAGAA	240
AAATTCGCCA CGGTAGCTTG GAAAAGACCT GCCGTCAAAC TCTCTGCAGC CGCGATGGTT	300
TTCCCTTGCC TTTTCAGTTC TTCTACCACA ATGCTGGCTA AACTAGTTTC TTCCCCATAA	360
CCATAGCAAA AGTCTCGTAA AGAAATTCCT TCGAAAGTCT GGCAGTCCAA GATTTGATTT	420

1187

TCCAAGATAT CCAGCGCTTG ATTCGCCTCT TCTTGACTGC TAGCCTTTGT TGACAGACCT	480
AGAGTGACTT CTCCTGTCTT GGCATAAGGG GCCAAGGTAG GATCGATCTG ATTATCAATT	540
AAATCAGCCA AAATCGTAAC CAACTGGCTC TCGCCAATCC CAAAGAAACG AAGAACTCGG	600
GAATACAGCT TGCTCCCTGT CATCAACTTG GGTAGAAGTT GGTTTAAGAC CATGGGTTTC	660
AATTCACTTG GCGGACCTGG AAGGACGACA TAGGTCACTC CGTCTACTTC TAATTTTCCT	720
CCAACAGCCA GTCCTGTTCG GTTTGGCAGT GGAATCGCTC CTTCTACAAT TTGAGCTTGT	780
CTTTCGTTAT TCGGTGTTCG GGCATAGTCT GGTGCGAGGG TAAAAAAGAT ATCCAAC TTC	840
TCCTGAGCCT GAGGATCAAA GACTAATGCT TTCCCTAAAA ATTTAGCTAG GGTTTGTTTG	900
GTTAGGTCGT CCTCAGTTGG CCCCAAACCG CCTGTCAAAA TCACCAGACT GCTACGTTGA	960
CTGGCAATCT CAAGCAAAGA CAAGAGACGA ACTTCATTGT CTCCTACAGC CGTCTGAAAA	1020
TATACATCTA CCCCATCTC AGCTAGTTTT TCCGACAAAA ACTGGGCATT GGTGTTGACA	1080
ATCTGCCCTG TCAAAATCTC TGTTCACA GCAATGATTT CTGCTTTCAT GTTTCCTCCT	1140
ACCTATCTAT TCGTATTTTT TTGAAAAAAT CGCAGGAATT TTCCTACGAT TGATTTTTTT	1200
ATTTGTATCA AAAGTTAATT ATCTTCATCA CCAACAGGTG CTCTGCCAAA TAAATCTTCA	1260
AATAAAACCG CATTGGTTTC AAGCTGAGTA ACTTCTTCTT GTCCCAAAGA ACGTCGGAGT	1320
AGATTTTGCA TTTCCAACAT ATGTGCTCTC GAAACAATCT GGTAAAGAAC ACCTTGAAGT	1380
ATCTCTCCTT CACCCTGCAA CTGCTGAGTT TCAATGGTTT TAAATGAATC TTTATAGCCT	1440
AGCAAGTTAG GGATACTTTT TGCAGACAAA TCAATATTGG TCTGCATATT GTCAC TCAA	1500
GCTTTTAGAA TCTCTTGATA ATGACCAATG CTATTTAAAC TGAGAGCTTT TTCCATGACT	1560
TTTGAATAA CTTACAGTTG ACGTTTTTGA CGACCATAAT CCCCCTCAGG ATCTTGGTAA	1620
CGCATTCGTG CATAGACTAG GGCTTCTTCT CCCC AATAT GTTGTCTCCC AACACCGATA	1680
GAAATAGTAT TAAATCTTC TTGGTCACTG ATAGAAATTG GGAAACCTAG GATATTATTG	1740
ACTGTAATAC CTCCTACTGC ATCCACTAGT TTTTGCAATC CTCTCATATT GACCATCACA	1800
TAGCGATCAA TATGGATATT CATCATTTTT TGAATGGTTT CTATAGCAAG CTCTGCTCCA	1860
CCATCTGCAT ATGCTGAGTT CAGTTTCGCT TCATGAGCCT GACCATTCCC TGATTCAATG	1920
CGCGTCAGAA TATCCCGCTC TAAACTCATC ATTGTTGTTT TTTTCGTTTT AGGATTCACT	1980
GTCATCAAGA TCATGCTATC ACTTCTACCG ACCCAAGTTT CAGTTCGTTC AACATTCCG	2040
GTGTCCACTC CCATTAACAG AATGGTTAGA GGTTCAGTCG CTCAATAAC CTTGGTTTCT	2100
TCACCATT TTTTATAGGT TTTAGCTAAG GTTCTGTGCC CTGTTGATA AATAGTATAA	2160

1188

GCAAAAACAC CTACTCCTAC TACAGTTACA GAAAGTAAAG CTAGCACCAT TCCAATAATT	2220
TTTTTAAACCA TATTTCTACT AACCTATCAG TTTACCCATC AAGTAAACAT CGATAAAATT	2280
CCCTTCTTCT ATATATGCCC CACGCTCTTG GCTACCTTCA ATGACAAAGC CATGCTTTTG	2340
ATAAAGATGG ACTGCTGCTT GATTACGAGT TTGGACAGTC AGTTGGAGAC GACGCAGAAT	2400
GCCACTTGCT TGTGCCCACT CTATCGCTTC TTCTAGCAAC AAACCTCCCA AGCCATTATT	2460
CCAATATCTT TTTCCAATCA CAATGAAGAG ATCTCCAATA TGACGGACTC TCTTACGCTG	2520
ATCAGCTGTA ATATTTACAA TACCAGCAAT TTGGCCATT TGAAGTGCAT GTAAGGTTAT	2580
CTGATTGTCC GAACTAGCTT GCTTGTGAG GAATATTTCC ATCTCCTCAC TAGTCAAGAG	2640
AATACCATCT CCGTCTAGGC TGGTAAAGTC TGTCTCCAAA CTCACACGAT TAAAAAGGC	2700
CACTAATTCA GCTGCATCTT TGGGCTCTGC TTCCCTAATG AGCAATTCAT ACTCCATATT	2760
GAAGCTCCTC TAACAATTTC TCAGCAGCA AACCCTTTGC CTGAAAAATT AAACGGCGTC	2820
CATCTGCTTC TTTTAGAATT TCCAATTCTA AATAAGCATC TGGCAAGGCA TCTCCTAAGA	2880
GATTTCCCA CTCAATAACA GTCACGCCGC CACCAAAGAT AAACCTATCC AAGTCGATAG	2940
AATCAGCATC TCCTTCAATA CGATAAACAT CTAGGTGATA AAGTGGAGT CGACCTTCAT	3000
ACTCTCTCAC GATAGTATAG GTGGGACTTT TAATCATTTG AGAAATCTGT AATCCTTTTG	3060
CAAGTCCTTT AGTAAAGGTC GTTTTACCTG CACCCAGTTC TCCAGTTAAG ATTAACAT	3120
CATTCTTTGC TAATAGATGG CCCAAACGCT CCCCTAAGGC TTGCAACTCT TCTTCATTTT	3180
TTGTGTACAT ACTCTTATTA TACCAAAAAC TTTTCTTTTG TGTCTATTTT CCTACTAAC	3240
TTATCATCAT AACATCCATA AAAAACAGGC TTCTCTAAA AGAAATGAG CGTAACAATG	3300
ACCAATACAA GATCTCGGAA AATATGACCA TAAAAGGAAA CTTCCTTCTT AACCGAATTT	3360
GGGACAAGAT AGGCTGCAAA AAACAAGCCC AGTCCAATAT AAATCAGAAG TGAGACAATG	3420
GTCATTGGAT TTCTTAAGAA AAGAAGTGTT GCTAAATAG TCACCAACAC TGTCTTTTTT	3480
CTGTCCAGCA TAGCAAGAAA ATCGCGCAGC TATTTTTTCA AGGGTAAAAA AATCAGCAAA	3540
TCTAGCCCAA ATAGGAAAAA GAAGGATGGC AATAAAAAGT CAACTAATTC TTGCTGCAGC	3600
GTATTTTGA TGAACAAGTT ATCTGACAAA ACAAGAACAG CTCCTAACAA ATTAATTAAG	3660
AGTAACATAC TGTA AAAAAG CTTACCGAC TTCTTACTGG CTAGGACACT ATGGACTTCT	3720
TGCTTACGGG TATAAAGATA ATTTACTCCA GCACAGATTC CTGAAACGAA AACCATGCTT	3780
CCGATGAAAA AAGCTGTACT TTGTTTAAAG GACAAGATGC ATTCCTTCCA TAGGAAACAG	3840
CTACTCAAAC TGATTTGAAT TAAAGCTAAC AAAAATAAGA TTCTCATTTGA TTTTCATCTTC	3900
TCTCTCCCTT CCTACCAATC ATTATACTAG GAGAAAAGAG AGAACTGTTT CTAATCTTCT	3960

1189

CAAATGTCTC TTTAAGACGC TAAACAAACA CTAGAGACTA ATACTCAATG AAAATCAAAG	4020
ATCAAACCTAG GTAGCTAGCC ACAGGTTGCT CAAAACAGTG TTTTGAGATT GCAGATAGAG	4080
CTGACGTGAT TTGAAGAGAT TTTCGAAGAA TATAAATTTG AAATCATGAA AATCCGTCAA	4140
ACGGGTGGTT GTTTTGTCTC GCACCTCACG GAGCGAGACG GACTCAGAGT CACATAATTA	4200
TAAGGCTGAT AGTATTAATC TAACTATCAG CtTmCAGGTT ATTTAACGTT TCAGAAAAAC	4260
TATAATGTCA AGATTAACCT AACAGTATCT AGTTCCTTCA AATAATTTTC TATCTTCATC	4320
AACATTAAG GATTGTATA AATCTTACAT AACTCTCTTG CTCTATATA ATAATTTTTC	4380
ACTTGTCTC TGTCTAGAAA TTTGGCTCCA GCATTTCCTA CAAGAATAAG TAGAGGAGCC	4440
AATTGGTAGC TTGTCTGTCT TTGTTTACAG AGTTCAATCG TTCAAGAGC TTCTTGGATG	4500
GCTTCATTAT ATTTTTCCTT TGATACTAGG TAGTGAGCGT AGTTGTAACG AACTCTGATG	4560
TAGCCAAATA AAAACTCTTG ATGGTCCAAA TTTTGTGTCT GATACAACTC TATTAAATGA	4620
GAGTAGTTTG CCTCATATTC TTGTTCACGA CCCACTAAGG AATAGAAATT AGATAGAGTA	4680
TTCAACGCCT TTAAATAAAT CAGAGTATTT GAAGAGACTT TTAATAATAT ATTTTCCAAT	4740
GACGAAATTG CCTCACACTT ACTGTCATAT TGATAGAAGT CAATTATAGA TTTAATCCAT	4800
TCAAGGTAAG TTCGGTCTTC TAATGTTAGA AAAGTGCTTC GTTCTACTTC TATTTTATAA	4860
AGATATTCTA AATCGTCATA ATTTCTGTCA TCTAATAGGC GAGCAGATAG ATGTTTGAAA	4920
TTAGAGAGGT TAGACTTAAC TTCGATTGTG TCATTGAAAA AGTAATCCAA AGGGAATTCA	4980
AGTCGTTGAG AGAGTTTGAA TAACAAGTCT CCGGAGGGAA TAAATGACC TCTTCAATT	5040
TTACTAATCT GGCTTTGTTC ACAAATTCCT TCTGCAAGAG TTGTGTTGGA GAGTCT	5096

(2) INFORMATION FOR SEQ ID NO: 205:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2395 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

ACAAGATAAA AATAAAGGAT TACAATGGGG AATATAAAGT AAACCGGTAA ACCTAAAAAG	60
AAAGGAGAAA AGATGAAAAA TGTACTTGTA GGGCATGGAC ATTTTGCTAC AGGGATTAT	120
AGTTCTTTAC AATTGATTGC AGGTAATCAA GAAAAATGTGG AGGCGATTGA CTTTGTGGAA	180
GGAATGTCAG CAGATGAACCT CAAGCAAAAA ATCTTACTTG CAATTTCAAA TGAAGAAGAA	240

1190						
GTTTTAAATCC	TAAGTGATCT	CTTGGGAGGA	TCGCCATTCA	AGGTTTCTTC	TACCATAATG	300
GGAGAAAATC	CAGCCAAGAC	AATGAATGTT	CTCTCGGGTT	TGAACCTAGC	CATGTTAATG	360
GAAGCAGTCT	TTGCTAGAAT	GGCTCATAGC	TTTGATGAGG	TTGTTAATAA	ATCAGTAGTG	420
GCGGCCCAGG	GCGGAGTCGT	AAATGGTAAA	GAATTGTTTT	CAACGGATGC	AGAGGAAGAG	480
GAAGAAGATT	TCGAAATCGGG	TATTTAAAGG	GTAAAAGAAT	GATAAAAAAG	GTTACGATTG	540
AAAAAATAAA	ATCGCCTGAG	CGCTTCTTAG	AAGTACCACT	TCTGACGAAA	GAAGAAGTCG	600
GCCAGGCAAT	CGATAAGGTT	ATTCGGCAGT	TAGAACTCAA	CCTTGACTAT	TTCAAGGAAG	660
ATTTCCCGAC	GCCAGCTACC	TTTGATAATG	TCTATCCAAT	CATGGATAAC	ACGGAATGGA	720
CCAATGGTTT	CTGGACAGGA	GAACTGTGGT	TGGCTTATGA	ATACAGTCAA	CAGGATGCAT	780
TTAAAAACAT	CGCTCATAAA	AATGTTCTTT	CTTTCCTGGA	TCGTGTCAAT	AAGAGAGTAG	840
AATTGGATCA	CCATGATCTC	GGCTTCTTGT	ACACACCGTC	TTGTATGGCT	GAATATAAGA	900
TAAATGGAGA	TGGAGAGGCT	AGAGAAGCAA	CCTTGAAAGC	TGCAGATAAG	TTGATTGAAC	960
GCTATCAAGA	AAAAGGTGGT	TTTATTCAAG	CTTGGGGAGA	CTTGGGCAAG	AAAGAGCATT	1020
ACCGTTTGAT	TATCGACTGC	TTGCTCAATA	TCCAACCTCT	ATTCTTTGCT	TATCAAGAAA	1080
CAGGCGATCA	AAAACTACTAC	GATATTGCAG	AAAGCCATTT	CTATGCTTCA	GCTAATAATG	1140
TAATCCGTGA	TGACGCTTCG	TCCTTCCACA	CCTTCTATTT	TGATCCTGAG	ACAGGTCAAC	1200
CCTTTAAAGG	TGTAACGAGA	CAAGGGTATA	GTGATGATTC	ATGCTGGGCA	CGTGGTCAAT	1260
CATGGGGAGT	CTATGGTATT	CCTTTGACTT	ATCGTCACTT	AAAAGACGAG	TCCTGCTTTG	1320
ACTTGTTTAA	GGGTGTGACC	AATTATTTCT	TGAATCGTCT	GCCAAAAGAT	CATGTGTCCT	1380
ATTGGGATTT	GATTTTAAAT	GATGGTAGTG	ATCAATCACG	AGATTCTTCA	GCAACAGCTA	1440
TCGCCGTCTG	TGGGATTCAT	GAAATGCTAA	AACATCTCCC	AGAGGTGGAT	GCTGACAAAAG	1500
ATATTTATAA	ACATGCTATG	CATGCCATGC	TTCGTTCCTT	GATCGAACAT	TATGCAAATG	1560
ATCAATTTAC	CCCTGGTGGG	ACAAGTCTCC	TCCACGGTGT	GTACTCATGG	CATTCAAGTA	1620
AAGGAGTGGA	TGAAGGCAAT	ATCTGGGGTG	ACTACTATTA	CCTAGAAGCC	CTTATCCGTT	1680
TCTACAAAGA	CTGGAACCTA	TATTGGTAGG	AGGAGAAATA	TGACAATGCC	AAATATTATT	1740
ATGACCCGTA	TCGATGAACG	GTTGATTCAT	GGACAAGGAC	AACTTTGGGT	AAAATACCTA	1800
GGTTGTAATA	CGGTCAATTGT	TGCCAATGAC	GAAGTAAGCA	CGGACAAGAT	GCAACAAACT	1860
CTGATGAAAA	CAGTTGTGCC	AGACTCAGTT	GCCATGCGTT	TCTTCCCTTT	GCAAAAGGTG	1920
ATTGATATCA	TTCAACAAGGC	TAATCCTGCT	CAAACGATCT	TTATCGTTGT	AAAGGATGTG	1980
AAGGACGCTT	TAACCTTGGT	AGAAGGTGGT	GTCACTATCA	AAGAAATCAA	TATTGGGAAC	2040

1191

ATTCACAATG CCCCTGGTAA AGAGCAAGTG ACACGCTCCA TCTTCCTGGG TGAAGAGGAC	2100
AAGGCGGCCC TCAAGGAATT GAGCCAAACT CATCAAGTAA CATTTAATAC GAAAACAAC	2160
CCAACAGGAA ATGATGGAGC TGTTCAGTC AACATTATGG ACTATATTTA ACAGAGGAGA	2220
TCGTTATGTC GATTAATGTA TTTCAGCGA TTTTAATTGG ATTATGGACA GCTTTCTGTT	2280
TTAGTGGAAAT GCTGTTAGGA ATTTACACCA ATAGATGTAT TGTTCGTCA TTGGTGTCG	2340
GAATTATTCT AGGTGATCTG TCATGCTCTT GCAATGGGAG CCAATGGTGA ATTGG	2395

(2) INFORMATION FOR SEQ ID NO: 206:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3342 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

CCTTCTTTAG AGGTTAATTT TGCAAAATCG TCGATTGTTA TATAAGGATT ATTATAGAGA	60
CTGTTTCGCAA AGAATCTCTG ATATGTTTTT GAATCTTTTG AATACAAAAC TATCTCTCTA	120
ATAGCATTGC CATCTGTTCC ATCAATTGGT AACATACCG TAACTAGAAA AAGAATTATA	180
TTCAAAATAA AAAATTCTGA TGCGTACGGC ACAAATCCCA AAAGTGCTAA TATTGCGACA	240
ATTAGGTTAG CTCCACCTCC CCCAAGAAG TAGAACACCA AATTCCTATC ACTATTTTTT	300
TCATTAGTAA TGTTCCTATT ACTCATTTGA CAATAACCGA ATGCTAATAA CACTGGAAAT	360
TTGAAATATA TTTTTTTTCT GAAATAGAAG AAAAAGGGAG TAGCAAGCAT CTCTAGTTTA	420
TAAGATAAAC ATCTTCCCAC TAAAAAATGA CCTAGTTCAT GTAATGTAAT TGATATTAAC	480
GAAATTAAAA TCAATCGAAA ATAATAGATT AATGAATCAT TTGGAAAAAT TATCAATAAT	540
AGGAACAATA ACGGAATCAA ACATAAATAT ATGACAGAGT TATTTAATAT TTTCAACATA	600
ATACCATTCC TCTAACTAT TAGCTTCAAA AAGGCGTTTT TTCTCCAAT ACATCTTCTC	660
AAAATGTTTC GAATCATAAT TTTCTAAAAT TAATTTTAtG TCTGGTAAGC TCTTCTTGA	720
TAATCCGTTG TTTTGTAATT AATTTTCCCT TCAAGTACAT CTTCAATTTT ATAAGTTGCC	780
TCCATCAACT GAGCCTCTGC AATATCTTTG AGTGAATTGG TAATTGAAAC TTGGTGTAAT	840
ATCTGTCCts CCATATATGA AAATATATCT CTAAGATATT CTGACACATT ATCAGAGCCG	900
TTACTCTCAG CAACATCTAA TGTTACAACA AACTTTCCAG CTAATCGAAA AAGATGGCTC	960
CACCCCCCAA TCCTTTCAAT AAAGTTTTTT GTGTCCACAG ATACGTTTTG TAAATATACA	1020

1192

GGAGAAGAGA TAATTATAAT ATCAGACTCT AATAACTCTT TTTTATAAC ACCTCCATCA	1080
TCAGCATAC TTTGCCTATC AATTCCTTTC TTAAACAACT CTTCTGAATC AGAATTAGAT	1140
ATTTCTAGCT CTGAATTGAA AGGTGTCCTG AAAGATATAT CAACATTATT TCTACTAGAA	1200
ATGATACTTG AAAGTCTCTT AGTATACTCT AAAGTCTTAG AGTTATGATT TCGCACTCCT	1260
GCATATATAA ATATTTTATT CATTTTAATT CATCCTCTCA ATTTGAATTT AGTAGATTTT	1320
TCAAGATAGT ATGGTACAAA AACAGACTTT TGTGACTCA CATTTATTACA TATGTTTTGT	1380
ATTAAACCAA AATCAATACT ATTTTGGAG TAATTTTGAT TTTAGTTTAA AATCATTTCT	1440
ATAACAGTAG CATATACCTC AAGCCGTTTA GCAATTAGAA TAGAACTTTT CTTTATTATA	1500
TTATTATCTC AACGAAAAGC TACACTATTA AAAATATTTT ATAGAATTAC ATATTAAACT	1560
AGTCAATCTT GGTATTTTTA TATTGCTTAA TGAGTGGACA CCTCTATTTT AGAAACAAAA	1620
CTATAAATTA AGCTAGATTT CAAGTAATGA GGGGATAACT ATCTTTTGT CATTCGTATT	1680
CAGTGCATA TACCTTAAAA AAGTATAAGC AATACCACTC ACACCTGTAT ACAAAGAAAA	1740
ATCTGGGAAA TTGCTTGTTT GGACGATACG ATACTCTCCT TCTTTTGATT TATTCATTAC	1800
AACACTACAC AATAAGACT CCAATTCCAT ACTAGTATCC ATTTCTTTCA TGTAGTCGAT	1860
GTAAAAATTT ATTATGGCCA TACTTCCATG GCAAAATGTA TCATTATCTA AACTAGCTAC	1920
AATTCCTCT GGAACACTTT GGGGATGATT AACTAATGTC CCAAAATCTC CACTACACCA	1980
CTTCAAGAA TGAATTTGA TTTTCTCCCT AGGAACTAGT TGTAATAATTA ATTCTTTATA	2040
TTTTTTAAGT CTTGTCACTT TATAAATATT TTTTAATGTA AAAATTACAC CTGATAGTCC	2100
ATGGCCAAAA CTATATCCAA AATTACTATT ATCTCTCTCG CTTACATCAT TATATAGCGT	2160
ATCACCTAAA CTTAATACTA GCCTTAGAAC ACGTTCCTTC TCTATTCCTC TCCTATAATA	2220
TCTTACCAGT GTATTAATTA AAGGTAGAAG ACCATTAATA TAGTCAGACT TGTTTGAAAC	2280
ACTTGCAAAA TCAGTCTTTT CAAGCTCAGT TAAACACTC TTTATATAAT TTAAGCATGC	2340
GAGAGTATTT GTATCGTAAT CCTCTATAAT GGATAGAACA ATGAAATATC CTATATCCCC	2400
AGTTAAACCA AATGTGGTCT TAGATAAAGA AACAGATGGC GGAATTGCAG ATAACATTTT	2460
ATTGTACAGT TGAGTATATG ATGATTTATC TTCAATAAT TTTACATAGT ACATAAACAG	2520
TAATATTCCA GCTCTACCCC TATACATATC ATTTCCCGTT TGTCAAGAC ACCATTTAGA	2580
ACCTTTAAAA TTAACAGGTA TACTCCAAAT TGGATATTCG TCATAAATAT TATTAATAAC	2640
CAAAGAGTCT GCAATATTTT CTACTTCATT ATGCAGAATA GTAACATAAC TTTCATTGG	2700
GAGTTTTTTT CTATTAGATA AGTTTAATTT ATATCCTTTT TTTGCTGAT CAAAGCTTGG	2760
AAAAATAATT TCAATGATAT CAAGTTGCTT TTCTAAATTT TCCAAATTAT TATTAGGTAA	2820

1193

ATATTTTCATA AAATAGTCAT ATCCAGAAAA TTGATGTAGG GAAATAAAAT GATTTCCAAA	2880
ATCATCGTAG ATTTTCATTGA TATTTGTATC TGTATAAAAA ATCGGAATAT CTAATAACCT	2940
CATTGTGTTCA CATTGCTTG CTACAATACC TTGATTAGAA AACTTATTGC TCCAGAGATT	3000
TTCCAATGCT TTTTCTCTAT CTAACATTTC TTCATAAAAA TCAGGATGAT ATAAAAAGA	3060
TAGTACTGAA GCATAGCTAT TTGTGTCTCT AAAAAGTACC CTGTCTTTA AACCATACAA	3120
GTTTGCTTTT AATAGCATTT TAAATCTTC TGTTTTATTT AACTCTTCAA ATATCAGATA	3180
AAAATCCCTA AAACCTTTT TGAATCTTT TATATACTTA TCAAATCTA TATCACCATC	3240
CCGAACAGGC AGGTTTTCC CACCTTCAA ATCAATTTTC CCAATATCAA ACTTTACCTT	3300
ATCAGTATTT AAATTAATTA AACTTGACC AGGATCCTC TA	3342

(2) INFORMATION FOR SEQ ID NO: 207:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 3454 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

GAGAAAAGAA TGTAAAGAA AAATGATATT GTAGAAGTTG AAATTGTTGA TTGACCCAT	60
GAAGGGGCAG GAGTTGCCAA GGTAGATGGT TTGCTCTTTT TTGTAGAGAA TGCTTTACCG	120
AGTGAAAAAA TTCTCATGCG TGTCTCAAG GTCAATAAAA AGATTGGCTT TGGAAAAGTT	180
GAAAAATACC TTGTCCAGTC ACCACACCGT AATCAAGATC TAGATTTGGC TTACCTGCGT	240
TCAGGAATCG CGGATTAGG ACACCTTTCT TATCCAGAAC AGCTCAAGTT TAAAACCAAG	300
CAAGTCAAGG ACAGTCTCTA CAAGATTGCT GGAATTGCAG ATGTAGAAGT TGCTGAAACG	360
CTTGGTATGG AACATCCAGT CAAGTATCGC AATAAGGCGC AGGTGCCCCG TCGTCGAGTG	420
AATGGTGTCT TGGAAACAGG ATTTTCCGT AAGAATTCGC ATAACCTCAT GCCCCTTGAA	480
GATTTCTTTA TCCAGGATCC TGTCATTGAC CAAGTCGTAG TAGCTCTTCG AGACCTGCTC	540
CGTCGTTTTG ATTTAAAACC TTATGACGAA AAGGAACAGT CTGGATTGAT TCGGAATCTT	600
GTGGTGCGTC GTGGTCACTA TTCAGGACAA ATCATGGTCG TTTTGGTGAC AACTCGTCCA	660
AAAGTTTTC GTGTTGACCA ATTGATTGAA CAAGTTATCA AGCAGTTCCC AGAGATTGTG	720
TCTGTCATGC AAAATATCAA CGACCAGAAT ACCAATGCGA TTTTGGTAA GGAGTGGCGC	780
ACTCTTTATG GTCAAGACTA TATTACGGAC CAGATGTTGG GAAATGACTT CAAAATCGCT	840

1194

GGCCCAGCCT TTTACCAAGT CAATACTGAA ATGGCGGAGA AACTCTATCA AACAGCCATT	900
GACTTTGCAG AGTTAAAAA AGATGATGTG ATTATTGATG CCTATTCTGG TATTGGAACC	960
ATTGGTTTAT CAGTCGCCAA GCATGTCAAA GAAGTCTACG GTGTTGAACT GATTCCAGAA	1020
GCAGTAGAGA ATAGCCAGAA GAATGCTTCT TTGAACAAGA TTACTAATGC CCACTATGTC	1080
TGTGACACGG CTGAAAATGC CATGAAGAAA TGGCTCAAGG AAGGTATTCA ACCAACC GTT	1140
ATCTTG GTT ATCCTCCACG CAAGGGCTTG ACAGAAAGCT TTATCAAAGC AAGCGCCCAA	1200
ACAGGAGCCG ATCGCATCGC CTATATCTCC TGCAATGTCG CAACCATGGC GCGTGATATT	1260
AAACTATACC AAGAGTTGGG ATATGAATTG AAGAAAGTCC AGCCGGTGGG TCTATTTCTT	1320
CAAACGCATC ACGTCGAGAC GGTAGCACTT TTGTCCAAAC TCGATGTCGA TAAGCACATA	1380
AGTGTGAAA TTGAGCTGGA TGAGATGGAT TTGACAAGTG CGGAGAGCAA AGCAACATAT	1440
GCTCAAATCA AAGAATATGT TTGGAATAAA TTTGAATTAA AAGTTTCGAC ATTATATATT	1500
GCACAGATAA AAAAGAAATG TGGAAATAGAA TTACGAGAAC ATTACAACAA GTCTAAAAAG	1560
GATAAACAAA TTATTCCACA GTGTACACCT GAAAAAGAAG AAGCCATCAT GGATGCTTTG	1620
AGACACTTCA AAATGATTTA ATAGAAAAGA ATGACAGTAT ATGACTTTCT GCATTTATTA	1680
CATTCTTACT TGGTATAGGA ACAGCTATTA TTCCTTTCTT GCAAGGTATC AATTAGAAAA	1740
TAGGCTCAAT ATAAAGATTG ATAGGATCAT TTTTATATTT AAAGGAGCGT TGAAATGATT	1800
GATAAAGGCA ACAAAAAATT TTAGGATAAA TTTGCTAAGT TGTATGCCTC TTTTATGAAA	1860
AAAGATAAAG AGGTTTATGA TAAAGTTTGT GAATATCTTA GTCCTCATTT GAATAAAGAT	1920
ATGGAGGTGC TTGAAC TTGTTGGTTT CGTGTCATAA CAGTTATAGA GGCAAATAGT	1980
TATGTAAATA TAAGGAGTTC AAGACTTCTA CCAAAGTTTA AAAC TAAAAA AATAAATAGT	2040
TGGTGTGCTG CTTACAATAT CCATTTTAAT AATGGATATT GTAAGCAGCA CCCCcAtGAA	2100
TTTAAAGATT CTTTAAAGAG TCTTATTTTG TGATGAAAAT TTAATATGTA AATCTCAGAC	2160
GATAGAAAT AAAA ACTCTA TCGTCTTTT TATACTCAA ATTAGGAGGT AAAAATGGTA	2220
AGGATAAGAG GTCCCACTTA AAACAATTTA TGGCAAAATA AGGACGGAAT AACACAACAA	2280
ATTCTCTAAA ACAAATCACT AAATCAATGT AAGATTGAAT GAAATCAATA TTTATGCTAT	2340
AATTAAATA ATTTAATGAA GAAAAAAGA GGGATATTAT GGCAC TTAAC TATAAACCAT	2400
TATGGATACA GTTAGCAAAA AAAGGACTAA AGAAAACAGA TGTAAATAGCT ATGCCAGGAC	2460
TTACAACAAA TGTTATGGCA CAAATGGGAA AGGATAAACC AATTACATTT AAGAATTTAG	2520
AAAGAATATG TAAGGCTTTA TCTTGCACTC CTAATGATAT TATTAGTTTT GAAGATAATT	2580
TTAGTGACGA GGAATAGAAA ATGACTTTAA GGACAGAAGA TCAAGTTAGG GATTATGCAA	2640

1195

GAGAAGTATA GGCTTTAATG AAGTTGAAGA AAACATCAAT CAAGGTACTG GTCAAATAAC	2700
TACTTTTAAAT CAATTAGGCT TCAAGGGATA TTCAAATAAG CCAGATGGTT GGTATTTACC	2760
TAAAAATATG AATGATGTAG CAATAATCCT TGAAACAAAA TCAGAAGAAA GAGATATTAG	2820
CAAACAAATT TTTATTGATG AGTTAATGAA AAATATAGAC ATAATTTAAC TAAAAATAAA	2880
AACTAGATCC TTTTGTGAAA AAATTATATT ATTAAATTTG TAACTGTATC TATTGACAAT	2940
GATAATTATT ATCGATACAA TAGACTTGAA ATATGTTTAA GGAGTTTTTA TGAaaaCAAA	3000
TTTTTCTAA TmGCTATTTT AGCTATGTGT ATAGTTTTTA GCGCTGTTC TTCTAATTCT	3060
GTTAAAAATG AAGAAAATAC TTCTAAAGAG CATGCGCCTG ATAAAAAGT TTTAGATCAT	3120
GCTTTCGGTC AAACATATTT AGATAAAAAA CCTGAAAGAG TTGCAACTAT TGCTTGGGA	3180
AATCATGATG TAGCATTAGC TTTAGGAATA GTTCCTGTTG GATTTTCAA AGCAAAATTAC	3240
GGTGTAAAGT CTGATAAAGG AGTTTACCA TGGACAGAAG AAAAAATCAA AGAACTAAAT	3300
GGTAAAGCTA ACCTATTTGA CGATTGGAT GGACTTAACT TTGAAGCAAT ATCAAATTCT	3360
AAACCAGATG TTATCTTAGC AGGTTATTCT GGTATAACTA AAGAAGATTA TGACACTCTA	3420
TCAAAAATTG CTCCTGTAGC AGCATACAAA TCTG	3454

(2) INFORMATION FOR SEQ ID NO: 208:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3752 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

CGGGAGTATA CTTAATATAA TTATAGTCTA AAAATGACTA TCAGAAAAGA GTAAATTTA	60
GATGAATAAG AAAAAAATGA TTTTAACAAG TCTAGCCAGC GTCGCTATCT TAGGGGCTGG	120
TTTGTGTTACG TCTCAGCCTA CTTTGTGAAG AGCAGAAGAA TCTCCACAAG TTGTCGAAAA	180
ATCTTCATTA GAGAAGAAAT ATGAGGAAGC AAAAGCAAAA GCTGATACTG CCAAGAAAGA	240
TTACGAAACG GCTAAAAAGA AAGCAGAAGA CGCTCAGAAA AAGTATGAAG ATGATCAGAA	300
GAGAACTGAG GAGAAAGCTC GAAAAGAAGC AGAAGCATCT CAAAAATTGA ATGATGTGGC	360
GCTTGTGTGTT CAAAATGCAT ATAAAGAGTA CCGAGAAGTT CAAAATCAAC GTAGTAAATA	420
TAAATCTGAC GCTGAATATC AGAAAAAATT AACAGAGGTC GACTCTAAAA TAGAGAAGGC	480
TAGGAAAGAG CAACAGGACT TGCAAAATAA ATTTAATGAA GTAAGAGCAG TTGTAGTTCC	540

1196

TGAACCAAAT	CGCTTGGCTG	AGACTAAGAA	AAAAGCAGAA	GAAGCTAAAG	CAGAAGAAAA	600
AGTAGCTAAG	AGAAAATATG	ATTATGCAAC	TCTAAAGGTA	GCACTAGCGA	AGAAAGAAGT	660
AGAGGCTAAG	GAACCTGAAA	TTGAAAAACT	TCAATATGAA	ATTTCTACTT	TGGAACAAGA	720
AGTTGCTACT	GCTCAACATC	AAGTAGATAA	TTTGAAAAAA	CTTCTTGCTG	GTGCGGATCC	780
TGATGATGGC	ACAGAAGTTA	TAGAAGCTAA	ATTAAAAAAA	GGAGAAGCTG	AGCTAAACGC	840
TAAACAAGCT	GAGTTAGCAA	AAAAACAAAC	AGAACTTGAA	AAACTTCTTG	ACAGCCTTGA	900
TCCTGAAGGT	AAGACTCAGG	ATGAATTAGA	TAAAGAAGCA	GAAGAAGCTG	AGTTGGATAA	960
AAAAGCTGAT	GAACCTCAAA	ATAAAGTTGC	TGATTTAGAA	AAAGAAATTA	GTAACCTTGA	1020
AATATTACTT	GGAGGGGCTG	ATCCTGAAGA	TGATACTGCT	GCTCTTCAAA	ATAAATTAGC	1080
TGCTAAAAAA	GCTGAGTTAG	CAAAAAAACA	AACAGAACTT	GAAAAACTTC	TTGACAGCCT	1140
TGATCCTGAA	GGTAAGACTC	AGGATGAATT	AGATAAAGAA	GCAGAAGAAG	CTGAGTTGGA	1200
TAAAAAAGCT	GATGAACTTC	AAAATAAAGT	TGCTGATTTA	GAAAAAGAAA	TTAGTAACCT	1260
TGAAATATTA	CTTGGAGGGG	CTGATTCTGA	AGATGATACT	GCTGCTCTTC	AAAATAAATT	1320
AGCTACTAAA	AAAGCTGAAT	TGGAAAAAAC	TCAAAAAGAA	TTAGATGCAG	CTCTTAATGA	1380
GTTAGGCCCT	GATGGAGATG	AAGAAGAAAC	TCCAGCGCCG	GCTCCTCAAC	CAGAGCAACC	1440
AGCTCCTGCA	CCAAAACCAG	AGCAACCAGC	TCCAGCTCCA	AAACCAGAGC	AACCAGCTCC	1500
TGCACCAAAA	CCAGAGCAAC	CAGCTCCAGC	TCCAAAACCA	GAGCAACCAG	CTCCAGCTCC	1560
AAAACCAGAG	CAACCAGCTA	AGCCGGAGAA	ACCAGCTGAA	GAGCCTACTC	AACCAGAAAA	1620
ACCAGCCACT	CCAAAAACAG	GCTGGAAACA	AGAAAACCGT	ATGTGGTATT	TCTACAATAC	1680
TGATGGTTCA	ATGGCAATAG	GTTGGCTCCA	AAACAACGGT	TCATGGTACT	ACCTAAACGC	1740
TAACGGCGCT	ATGGCAACAG	GTTGGGTGAA	AGATGGAGAT	ACCTGGTACT	ATCTTGAAGC	1800
ATCAGGTGCT	ATGAAAGCAA	GCCAATGGTT	CAAAGTATCA	GATAAATGGT	ACTATGTCAA	1860
CAGCAATGGC	GCTATGGCGA	CAGGCTGGCT	CCAATACAAT	GGCTCATGGT	ACTACCTCAA	1920
CGCTAATGGT	GATATGGCGA	CAGGATGGCT	CCAATACAAC	GGTTCATGGT	ATTACCTCAA	1980
CGCTAATGGT	GATATGGCGA	CAGGATGGGC	TAAAGTCAAC	GGTTCATGGT	ACTACCTAAA	2040
CGCTAACGGT	GCTATGGCTA	CAGGTGGGCT	TAAAGTCAAC	GGTTCATGGT	ACTACCTAAA	2100
CGCTAACGGT	TCAATGGCAA	CAGGTTGGGT	GAAAGATGGA	GATACCTGGT	ACTATCTTGA	2160
AGCATCAGGT	GCTATGAAAG	CAAGCCAATG	GTTCAAAGTA	TCAGATAAAT	GGTACTATGT	2220
CAATGGCTTA	GGTGCCCTTG	CAGTCAACAC	AACTGTAGAT	GGCTATAAAG	TCAATGCCAA	2280
TGGTGAATGG	GTTTAAGCCG	ATTAAATTAA	ATCATGTTAA	GAACATTTGA	CATTTTAATT	2340

1197

TTGAAACAAA GATAAGGTTC GATTGAATAG ATTTATGTTC GTATTCTTTA GGTACCTATC	2400
TTATGATTTC AGGAAATGTC ATTAAAAAAA CGACTCATTT TCTCTAACCT GAAAAATAGA	2460
TTAGAGAAAA TGGGTTGTTT TATCTATTAT AGTTATTTGA ATGAAGmTAA GAAGAAGGTA	2520
TACTCACATC ATTCACATAA TCTGTATATT GACTATAAGT TTTAAAAAAC AATTTTAAAG	2580
CTCTTCCTTG TCTTCTCTAA CCAAGCGTGT TATAATGAAT ACTGCTCAAG CGACCTTCAA	2640
TCGTGAAGCA CACACGACCT TCAATCGTGA ATAAACGAAT AGATGGGAGA CTTACCATGA	2700
GTGATAACTC TAAACACGT GTTGTCTGCGG GGATGAGTGG TGGTGTGAT TCGTCGGTGA	2760
CGGCTCTTTT GCTCAAGGAG CAGGGCTACG ATGTGATCGG TATCTTCATG AAGAACTGGG	2820
ATGACACAGA TGAAAACGGC GTCTGTACGG CGACCGAAGA TTACAAGGAT GTGGTTCGGG	2880
TGGCAGACCA GATTGGCATT CCCTACTACT CTGTCAATTT TGA AAAAGAG TACTGGGACC	2940
GCGTTTTTGA GTATTCCCTA GCGGAATACC GTGCAGGGCG CACGCCAAAT CCGGACGTTA	3000
TGTGCAACAA GGAATCAAG TTCAAGGCCT TTTTGGACTA TGCCATAACC TTGGGGCGAG	3060
ACTATGTAGC GACTGGGCAT TATGCTCGAG TGGCGCGTGA TGAGGATGGT ACCGTTCACA	3120
TGCTTCGTGG CGTGGACAAT GGCAAGGATC AGACCTATTT CCTCAGCCAA CTTCGCAAG	3180
AACAACCTCA AAAAACCATG TTCCCACTAG GACATTTGGA AAAGCCTGAA GTACGCAGAC	3240
TAGCAGAAGA AGCAGGCCTT TCGACTGCTA AGAAGAAAGA CTCGACAGGG ATTTGCTTTA	3300
TCGGAGAAAA GAACTTTAAA AACTTTCTCA GCAACTACCT GCCAGCTCAG CCTGGTCGCA	3360
TGATGACTGT GGATGGTCGC GATATGGGCG AGCATGCAGG TCTTATGTAC TATACAATCG	3420
GTCAGCGTGG CGGACTCGGT ATCGGTGGGC AACACGGCGG TGACAAATGCC CCTTGGTTCG	3480
TTGTCGGAAA AGATCTAAGC AAGAATATTC TCTATGTAGG ACAAGGATTC TACCATGATT	3540
CGCTCATGTC AACTAGCCTA GAAGCCAGTC AAGTCCACTT TACTCGTGAA ATGCCAGAAG	3600
AGTTTACGCT AGAATGTACG GCTAAATTCC GTTACCGTCA GCCTGACTCT AAGGTGACCG	3660
TTCATGTCAA AGGAGAAAAG ACAGAGGTCA TCTTTGCGGA ACCACAACGC GCGATTACAC	3720
CAGGACAGGC AGTTGTCTTT TACGATGGCG GG	3752

(2) INFORMATION FOR SEQ ID NO: 209:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3580 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear